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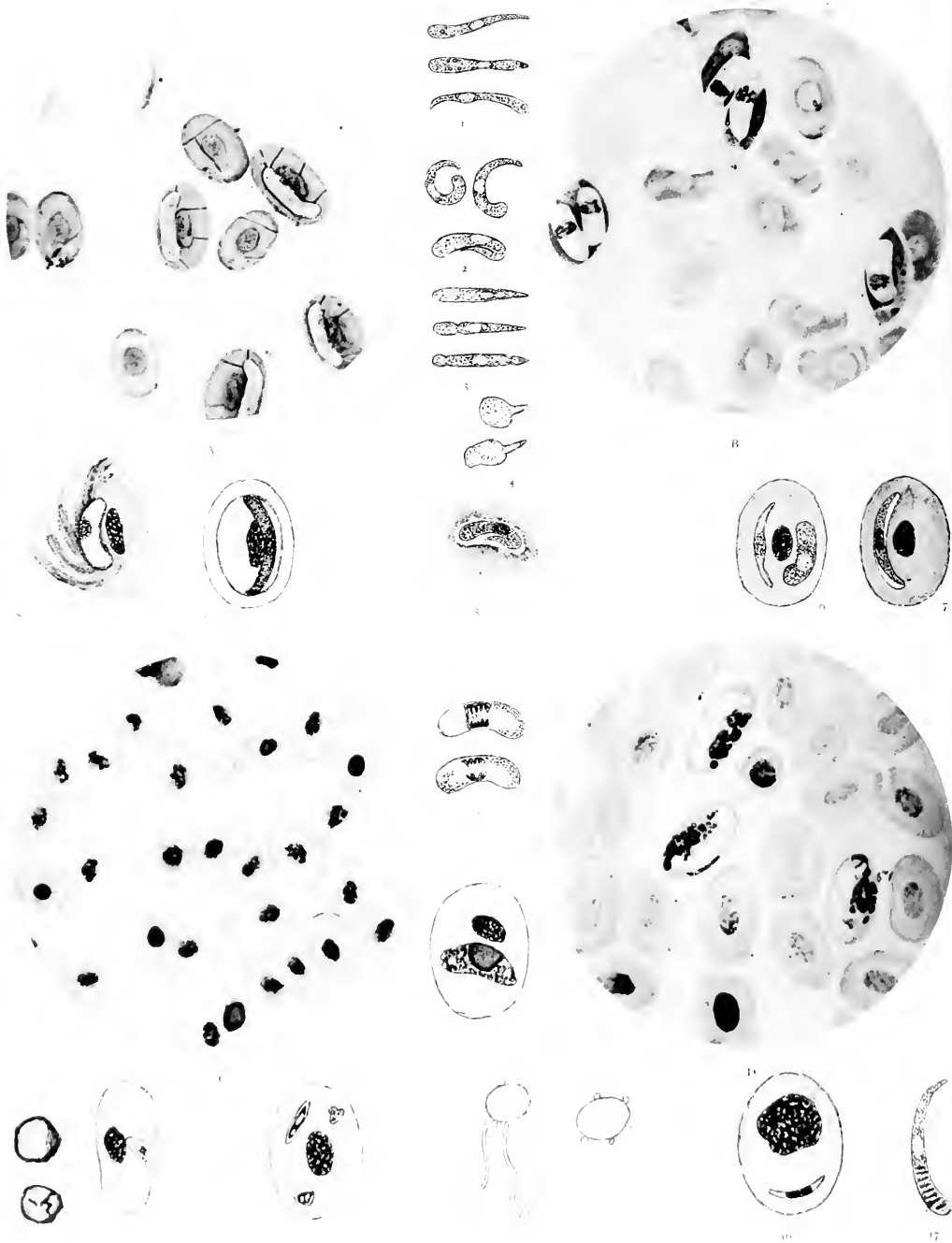


PLATE II. Hemopodidia in Rectum.

two to three microns wide by twelve to twenty-two microns long. The whitish or hyaline body is finely granulated, with two larger highly refractive vacuoles. There may be three or as many as eight or ten vacuoles in one animal, yet there is no rule for their distribution except that nearly always a larger one can be distinguished both in the anterior and posterior half of the body, the others being unevenly scattered—in fact, moving to and fro with the general movement of the body. The pointed extremity always floats foremost; it may also attach itself to some casual obstacle in the plasma, but the posterior end does so as a rule. Other lively movements are not rare. Besides floating between the blood-cells the parasites bend and unbend one third of their length like a pocket knife, double themselves up to a ring and straighten again, or, after attaching the thicker end to a blood-cell, swing for minutes in a circle or drag along the cell to which they are anchored (Fig. 2). I have never seen the animal pierce a blood-cell, a feature which is described as of frequent occurrence in *Drepanidium iranarum*. Their speed varies much. They may rest in one spot for a long time or pass the length of an erythrocyte—i. e., about twenty microns—in three seconds. While they are floating along another peculiar motion is sometimes seen, a symmetrical indentation or annular constriction running from the anterior to the posterior end. A new constriction may commence before the first one has run off, thus giving a beaded outline (Fig. 3). The forward movement is not accelerated in this way—in fact, it is evident that this motion serves only to mix or shake up the constituents of the endoplasm. Sometimes the constriction is arrested at one spot for a longer time, the animal turning on the pivot to all sides as if it would break off; suddenly, however, the constriction glides slowly off to the posterior end. True amoeboid movements are not met with, although the posterior end sometimes contracts and bulges out to such an extent that the whole animal presents the shape of an ampulla, the anterior end simulating a pseudopodium (Fig. 4).

In the fresh, unstained specimen the nucleus is not easily discerned. In many cases, however, one can see an ovoid spot near the middle about a fourth of the size of the animal. It is seen bulging out when the parasite happens to lie on its side. The nucleus appears as a lighter reddish spot with indistinct outlines, or as a clump of larger granules when the animal is dead. In some cases none but freely moving organisms can be detected; in the majority, however, both free and intracellular forms are found. Of the intracellular structures two types are to be distinguished: a long and slender one and a shorter one, rounded at each extremity, of bean or kidney shape (Fig. 6). This is due to the folding of its pointed end again to its body. The vacuoles and nucleus are plainly visible as in the free form. In the fresh blood the animal fills its intracorporeal space completely, but in the smear after fixation a white peripheral

rim surrounds the animal more or less. This is an artifact produced by the contraction of the body in the fixing reagents. The shrinkage is sometimes avoided by rapid fixation of the fresh smear in Lang's fluid. The intracorporeal organisms, as a rule, lie quiet, yet at times they move slowly inside the cell. Once the erythrocyte was violently distorted for ten minutes to all possible shapes without breaking. I have never witnessed a rupture of the cell. They are not affected in the least by heating on a warming stage, though at the same time the free ones are rather more lively and the leucocytes show great activity. The parasites are very tenacious of life and retain their form long after death. Even after two days they exhibit slow movement in the hanging drop, and when, after a week or more, the blood-corpuseles are entirely disintegrated or appear as mere shadows, the outlines and details of the hemosporidia are still plainly visible. The parasites may survive their host for a long time—e. g., a frog showed signs of advanced decay and still the animalcules were quite lively in the plasma. No pigment was ever found in the organisms.

In the dried and stained specimen the free parasites are easily recognized if they retain their original shape (Fig. 1, f). More often they bend just before the film of the smear dries (Fig. 5). The two varieties of the intracorporeal hemosporidia—the long and narrow one slightly curved, and the shorter stout one of kidney shape—are also better distinguished than during life. Both may occur in the same blood, but one variety generally predominates (photographs A and B). In the slender form the chromatic substance is scattered in fine dustlike granules all over the length of the parasite; it is amphiphilic, staining both with eosin and methylene blue. The short types are sometimes almost devoid of it, or larger masses of chromatic granules are grouped toward both ends (Figs. 8 and 10). The long organism is either stretched out to its full length or merely the tip curved in. In the short one the curved-in outline is mostly obliterated; many, however, still show clearly that about one third of the whole length is bent toward the body. Hence, the nucleus, which otherwise would be in the middle, is placed near one end.

The appearance of the nucleus varies considerably. In the slender form it consists of an elongated oval clump of fine chromatin granules. In the stout form it may be an ovoid, slightly staining area, the rest of the organism taking a deep stain; or it is a dense mass of heavy chromatin granules, which give it the appearance of a square cross band (photograph B). In other instances the chromatin is arranged in filaments like a spireme in mitosis, or opposite threads stand at right angles to the long axis of the parasite (Fig. 10). Labbé describes caryocinesis as occurring in the hemosporidia. The figures found by myself can not be claimed to be typical examples of caryocinesis; nevertheless, they recur with such regularity in these slides in which nearly all

the parasites have reached the same stage of maturity as to seem to be of significance (Fig. 10).

The intracellular parasite is, as a rule, completely surrounded by the cytoplasm. Occasionally one end or both ends protrude from the outlines of the blood-cell. In most cases the infected blood-cell contains but one parasite, but in many two are present, which are usually of the same age or seldom of different size. In some slides there are as many double inclusions as single ones. In rare exceptions three hæmosporidia are found in a single blood-cell. The number of the parasites varies extremely. There may be found two or three infected blood-cells in a whole slide, while in other slides every third erythrocyte may contain a hæmatozoon. An instance of the latter condition occurred in a copperhead of North Carolina of a size somewhat below the average (twenty-four inches). Danilewsky found more parasites in his turtles the older the animal. This observation is not confirmed in my snakes. The moccasins, which on account of their number and universal infection present the best objects of comparison, generally showed fewer hæmosporidia the older the host.

The erythrocytes react differently toward the parasites. At times a simple elongation or a rounding off or a slight distortion is effected. Often, however, the parasite does not seem to exert any influence at all; both hæmoglobin and nucleus stain as they do in the normal cell (Figs. 6 and 7). This condition may remain unaltered for a long time, and even after the parasite has emerged from the cell its remaining fragments stain normally. At other times the hæmoglobin is gradually absorbed, the decolorized and not distended stroma remaining, or the erythrocyte is enlarged to two or three times its normal size; the hæmoglobin stains faintly, fading off halo-like into its surroundings (Fig. 8). Or, hæmoglobin and stroma are absorbed alike, a trace of the latter with the adherent nucleus being attached to the hæmosporidium. Another remarkable behavior of the hæmoglobin was seen in the blood-cells of a ribbon snake. The erythrocyte of normal size had a colorless peripheral zone surrounding an area of normal hæmoglobin which enveloped both nucleus and parasite (Fig. 9). Excepting a displacement to one side or to one extremity of the blood-cell, some mechanical pressure, as elongation or flattening, the nucleus remained unchanged, this even after the cell had lost its hæmoglobin or had been entirely absorbed. Very seldom a cell is found the nucleus of which is enlarged to double its normal size, showing no sign of disintegration. In a single instance in a copperhead the nuclei of several erythrocytes were directly invaded by the parasites and considerably enlarged. Thus far no infected leucocyte has been found.

These varying conditions of the erythrocyte are not deemed to be of great import, yet they have been detailed because some writers incline to use even such trifles for purposes of classification. For this reason it may be said that, though one type or other predominates

in the respective species of snakes, all types are found more or less promiscuously. The different reactions of the blood-cell may be partially explained by the diversities of the hæmoglobin. Since its variability in warm-blooded animals even of the same order is so well known, it is not illogical to assume a similar condition in cold-blooded animals.* Most observers have laid little stress upon the substratum on which these parasites are living. It is improbable that the blood of the different species or orders of animals should react exactly alike, and at least some biological diversities might thus be accounted for—e. g., *Hamamaba subimmaculata* (Grassi and Foletti), which was found in a single individual of falcon, is distinguished from its nearest relations only by the lack of pigment.

Now the question of a capsule arises. Doubtless the first impression given by the presence of the white rim is that of a capsule; nevertheless, it is evident that the parasite is lying in a mere gap of the surrounding protoplasm. Whenever a crescent-shaped hæmosporidium seems to float freely in the plasma, it is barely possible to trace some very faint remnants of the stroma of the destroyed blood-cell; its nucleus is nearly always found adherent to the parasite by some hidden bond. A similar figure is produced when the free hæmosporidia fold themselves the instant the film of the smear is drying. The organism shrinks as described above, and the faintly staining plasma forms exactly the same bean-shaped inclosure which we encounter so distinctly in the erythrocytes (Fig. 5). An instantaneous production of a capsule is certainly an impossibility.

All observers agree that the development of the hæmosporidia in cold-blooded animals is extremely slow. The ophidian hæmosporidia are no exception to this rule. Neither a careful watching of a hanging drop for about a week, with occasional warming, nor the examination of the same blood, several days, weeks, or months intervening, showed an appreciable change. It has not been my good fortune to follow up a complete cycle of development, so that on this point I have only a few disconnected facts to offer. In the blood of a moccasin which, to my regret, was not taken before death, some of the numerous intracellular parasites exhibit the mitotic figures described above, but not so distinctly as in some other preparations. Later, in the place of the nucleus in many parasites a roundish disc of three to four microns in diameter appears. It stains palely with methylene blue, with a much darker rim. The rest of the organism is filled with a colorless granular mass of blue granules (cf. Plate plate graph. CV). The discs, having been extruded from the cells into the plasma, where they enlarge somewhat to a diameter of ten microns in diameter. Some of these discs are

* It may be mentioned here that the hæmoglobin of the cold-blooded animals is not so variable as that of the warm-blooded animals. The hæmoglobin of the cold-blooded animals is not so variable as that of the warm-blooded animals. The hæmoglobin of the cold-blooded animals is not so variable as that of the warm-blooded animals.

scattered across the pale central surface (Fig. 12). Whether these bodies undergo segmentation in the circulating blood or are previously carried to some internal organ, I am unable to say. By examination of fresh liver and kidney and in the numerous sections of kidney, liver, and spleen nothing was found, except in a single preparation of a moccasin liver, in which two bodies were seen which are apparently sporocysts, of about fourteen by seventeen microns, with numerous tiny spores. The bone marrow, for which the only available place would be the vertebrae, has not been investigated.* In the same blood were small roundish or fusiform bodies, highly refractive in the centre and staining with a blue rim, about three by five microns. Some of them adhere closely to a blood-cell, causing a deep inflection, as if in the act of penetrating (Fig. 13). The same bodies are seen inside some erythrocytes, where they assume also a circular or indented shape. As they grow, a minute crescent-shaped parasite of the described nature, with a tiny nucleus, will be seen (Fig. 14). According to the investigations of Labbé, who alone thus far has been able to follow up the complete process of development, the animals, after reaching a certain stage inside of the blood-cell, live for a while in the plasma to copulate there and reenter the blood-corpuscles for maturing. I am inclined to think that the slender intracellular parasite, which exhibits no bending, represents the first stage, that its size somewhat increases in the plasma, so that on reentering the blood-cell it has to adapt itself to the small house by bending a part of its body. The plica of the interior curve is obliterated, leaving an apparently smooth, bean-shaped body which is ready for further maturation.

An observation of great importance was made in a single instance in the blood of the West Indian tree boa. The fresh blood exhibited numerous short intracorpuseular, but still more freely moving parasites of extraordinary activity. A hanging drop was laid aside and examined again eighteen hours later. There were still living haemosporidia, but on the margin of the drop there were found two forms of *Polymilus*, one a spherical reddish body with five buds, the other with six buds and two long, colorless flagella (Fig. 15), the latter provided with the well-known olive-shaped swellings. No granules of pigment were seen. They were motionless and had disappeared the following day. This type of structure has thus far been observed only in the gymnosporidia (Labbé), the blood parasites of birds, and of human malaria. Its real nature has been a riddle to all investigators; most observers proclaim them a phase of degeneration, and until recently MacCallum attributed to them a fertilizing function. According to his researches, the flagella break off from the central sphere, whirl around in the plasma, and penetrate another similar granulated body. Whatever the correct explanation

of these organisms may be, their coincidence with the haemosporidia of cold-blooded animals either tends to prove that such a mode of propagation exists in a larger number of related species than has been hitherto believed, or it establishes a near relationship between the orders of *Hemosporidia* and *Acystosporidia*, which have been of late separated by Labbé. In tracing the possible origin of the haemosporidia it must be remembered that most of the writers consider the intestinal canal to be the port of infection. Danilewsky, in his very first publication (*Biolog. Centralbl.*, 1885), pronounces this the most probable. It is surely interesting that the most recent paper of MacCallum not only supports the same hypothesis, but also proves by the microscope the presence of an abundance of so-called pseudo-vermiculi—*i. e.*, of the motile extracellular types—in the contents of the intestines and in the cells of the intestinal walls.

In the snakes examined it is evident that the aquatic species exhibit the largest percentage of infection. The frog has been known for years as the first and only host to harbor these parasites. Moccasin snakes live almost exclusively on batrachians and fish; only in later years do they also partake of warm-blooded animals, mostly rodents. All the other species found infected live either on frogs, as is the case with the water, garter, and ribbon snakes, or on other snakes and lizards, which is the case with the king, gopher, and coral snakes. The copperhead feeds on wood frogs (*Rana silvatica*), birds, and other snakes; the prairie rattler, so far as known, only on rodents and birds, but in his desert home he undoubtedly does not despise an occasional lizard. The diamond-back and the banded rattler eat only warm-blooded animals. It must be admitted that most of the snakes are exposed to the same noxious influences which may infect a frog, but the food habits of the different species seem to point strongly to the intestinal canal as the road of entrance for the infection. The faces of the snakes have been frequently examined for haemosporidia or their like, and, while snakes are infested by an amazing amount and variety of entozoa, the eggs of which were often seen, no trace of haemosporidia was discovered.

Hence the search for the presence of haemosporidia in American batrachians, of which to my knowledge no record exists, suggested itself. The frogs of the neighborhood of New York are not often affected—perhaps one in five of those examined. Frogs from North Carolina, however, were in greater percentage, and those from Florida were nearly all invaded by blood parasites. The same ratio of infection was found in a number of frogs high up in the Adirondack Mountains; these were all taken from a swampy expansion of the Ausable River. The parasites of the frogs were to all appearances exactly the same as those of the snakes, except that in some frogs their size was below the average. In nearly all of the Southern frogs the flagellate *Trypanosoma* was present in varying abundance. These facts

* The bone marrow of an infected frog gave no result.

lend added strength to the hypothesis of a spread of infection in the snake through its food.

An interesting type of parasite occurred in two frogs from the neighborhood of New York, one each from Long Island and Staten Island. Its morphology and the distribution of vacuoles correspond with those described previously; in size, however, it was larger—more than twenty microns long by about seven or eight microns wide—and it moved with the thicker end forward (Fig. 17). Of vacuoles there were always more than two; the nucleus was easily distinguished and the cross stripes of the myocyte were sometimes visible. The most remarkable difference lies in the behavior of the invaded blood-cell. As soon as a small organism has entered the cell the nucleus reacts, as a rule, at once by a considerable enlargement to more than double its former size (Fig. 16). As the parasite grows the erythrocyte enlarges slightly, but the hæmoglobin remains unchanged, staining as in a normal cell. Nevertheless, as the haemosporidium stretches out so that its length exceeds the diameter of the cell, it folds in to accommodate itself to the interior. In the meantime the blood-cell nucleus has broken up into two, three, or innumerable fragments, which are pushed to one side or are scattered all over the cell (photograph D). Occasionally, though very rarely, a blood-cell is found the stroma of which is breaking up, while the enlarged nucleus remains entire. The body of the large intracellular organism sometimes, but seldom, shows a nucleus. One of these frogs had in its faeces very similar but smaller organisms with a single reddish vacuole and decidedly amoeboid movement, together with an immense number of some coccidian sporocysts which sporulated freely.

With the exception of the last type described, all the organisms found in the different snakes, the turtles, and the frogs seem to be materially the same. Of all the turtles examined, the species *Chrysemys* alone was infected. This may be explained by the circumstance that most of the other specimens were younger than those of *Chrysemys*.

Any one familiar with the blood parasites in question will agree that the species described resemble the one named *Drepanidium ranarum* by Lankester, discovered in turtles and named *Harmogregarina Stepanovi* by Danilewsky, *Drepanidium princeps* by Labbé. Great emphasis is laid in classification on the nucleus and the vacuoles. How much these may differ even in the same individual I have tried to show. The annular constrictions which prompted Labbé to establish a new species, *Drepanidium monilis*, were seen occasionally by me in the living and moving parasites, while others in the same preparation were gliding along without contraction. An absolutely reliable classification is rendered possible only by the observation of the development. So long as this is wanting in the majority of these animals we ought to refrain from finding a new species in every new host.

For the same reason I would assign the second species described in this paper also to the species *Drepanidium*, perhaps *Drepanidium magnum* (Kruse). Its most striking influence upon the blood-cells is caryolytic; it differs, however, widely from the organism called by Labbé *Karyolysus lacertarum*. According to his observations, it never exceeds the length of the blood-cell and does not destroy the nucleus except after the previous disintegration of the erythrocyte. Whether the changes observed in the two frogs entitle us to make a new *Karyolysus ranarum*, or at least a *Drepanidium karyolyticum*, which may act somewhat differently in frogs and in lizards, will depend upon further investigation.

The question has been raised whether the parasites are pathogenic for their host. A decision of this point is now impossible, although the presence of a parasite in every four or three blood-cells would presumably be not without deleterious effect. The pathological changes, if any, in the internal organs have not been followed up. Most of the snakes kept in captivity perish from the so-called canker of the mouth, a disease dreaded by all keepers of zoological collections. It is a diphtherialike membranous affection, commonly associated with and perhaps caused by a coccus, which is now under investigation. It was first thought that the blood disease might somewhat influence the affection of the mouth, but such was not the case. On the contrary, rattlesnakes which are exempt from haemosporidian invasion succumb mostly to the mouth disease. The experience related above—namely, that the older moccasins show generally less severe infection than the younger ones—points to the possibility of an elimination or to a self-limited existence of the parasite.

Inoculation from animal to animal of the same or a different species has been attempted by a number of investigators, but with little success. My own inoculations have been done from snake to snake, to frog and to newt; and from frog to frog, etc. Fresh blood was injected into the lymph sac, peritoneum, and intravenously; infected liver was also fed, i. e., pushed down into the stomach. All the experiments were without positive result. It is not unlikely that the frequent failures reported are due to the slow development of the parasites. *A priori* we ought to expect a ready transfer by the infected blood corpuscles, as it is well known that they are quickly dissolved in the plasma of another host even of the same species. The parasites liberated in this way ought to spread rapidly through the circulatory system of the new host. Unless, however, they have the proper state of maturity at the time of the inoculation they will be deprived of their protective envelope, only to perish so much sooner. On the other hand, even after a successful inoculation, we are liable to find no parasites before we can decide what our experiments are to prove. These difficulties in the way of a successful transmission do not apply exactly to the experiments on

birds and men, since the development there is so much more rapid; yet it may be all-important also in this case to select the most propitious time.

I may summarize the results of my investigations in the following conclusions:

1. Infection by hæmosporidia is not rare in American snakes, harmless as well as poisonous.
2. The aquatic species are more prone to such infection.
3. The species of parasites do not differ materially from those known in other cold-blooded animals.
4. A species of caryolytic drepanidium seems to exist in frogs.
5. The type of *Polymitus* thus far observed only in hæmatozoan infection of birds and men occurs also with the hæmosporidia of reptiles.

I can not conclude without thanking Dr. A. V. Moschowitz for material and untiring assistance in the foregoing researches. To Dr. T. M. Prudden I am indebted for many courtesies and valuable advice during the pursuit of my work, also to Dr. Edward Leaming for the careful and painstaking execution of the photographs.

DESCRIPTION OF THE ILLUSTRATIONS.

The figures have partly been drawn with camera lucida. The size has been arbitrarily enlarged. Zeiss $\frac{1}{2}$, ocular 1, has been about doubled for more distinct illustration. The photomicrographs with Zeiss's apochromatic are $\frac{1}{1000}$.

Figs. 1 to 6 represent the living forms of parasites.

1. Free parasites in their usual outline.
2. Free parasites bending in different shapes.
3. Free parasites with annular constrictions.
4. Free parasites forming ampulla.
5. Curved form in surrounding plasma, simulating a capsule.
6. Living forms in red blood-corpuscle.
7. Slender intracorpuseular form, stained. Moccasin's blood.
8. Short, bean-shaped form, the erythrocyte dissolving. Prairie rattler's blood.
9. Peripheral decoloration of erythrocyte. Ribbon snake.
10. Mitotic figures in short type of intracorpuseular parasite. Moccasin's blood.
11. Formation of round disc in the parasite of preceding type.
12. Discs extruded, floating freely in plasma.
13. Spore penetrating a red blood-cell.
14. Three different aspects of intracorpuseular spore.
15. Two specimens of *Polymitus*. West Indian tree boa.
16. Frog's blood. Enlargement of nucleus after invasion of small parasite.
17. Frog's blood. Large extracellular parasite with cross stripes of myocyte.
- A. Slender form of intracorpuseular parasite; one free in plasma. Moccasin's blood. The cross stripes of the blood cells are the effect of shrinking.
- B. Short form of intracorpuseular parasite. Moccasin's blood.

- C. Formation of disc in intracorpuseular parasite. One free spore and one free disc. Moccasin's blood.
- D. Caryolytic parasite in frog's blood.

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PAPILLOMA OF NASAL SÆPTUM.*

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THE object of this paper is to establish in full the history, condition, and examination of a patient having a true papilloma of the nose, and to present a specimen with photomicrographic views of the tumor removed from the nose.

Mrs. V., aged sixty-four, applied at my office for relief of a right-sided nasal obstruction. She stated that she had been for four years conscious that something occluded the right nares. The occlusion was partial and constant, and was not greater at night than in the daytime. There were no other symptoms.

Examination disclosed a warty growth located on the mucous membrane of the right side of the nasal septum and behind the tubercle of the septum. This warty growth partially filled the inferior meatus, causing some obstruction to inspiration more than expiration. The growth was not ulcerated, and no enlarged vessels were seen.

After cocaineization the snare removed the growth; the base was treated with chromic acid, a dusting powder was prescribed for home treatment, and the wound healed in one week.

This patient has been seen from time to time since the removal, now one year ago, and the nose presents a normal appearance. The obstruction symptoms were relieved. The family history of this case showed no syphilis, cancer, or tuberculosis either in the patient, her ancestors, or her children. She is of robust frame, somewhat given to rheumatic conditions, indigestion, and cardiac palpitation from gastric causes. Her menstrual life was normal and ceased in the usual way without difficulty. There are no papillary growths on the patient's skin.

Examination.—In the right naris, at the inferior meatus, behind the tuberculum septi, and springing from the septum, is a warty tumor three quarters of an inch in diameter, irregularly rounded, with rather a broad base, slightly pedunculated. The tumor contracted one third in bulk under cocaine (four-per-cent.) solution, and after removal and hardening in alcohol shrunk three quarters of its original bulk.

* Read before the Laryngological Section of the New York Academy of Medicine, October 27, 1898.

Sections were made in the usual way, and stained with hæmatoxylin and carmin. Macroscopically the sections appeared to be formed of two layers, an outward epithelial and deeply stained layer surrounding another less deeply stained interstitial layer. This inner layer was divided very frequently into branches,

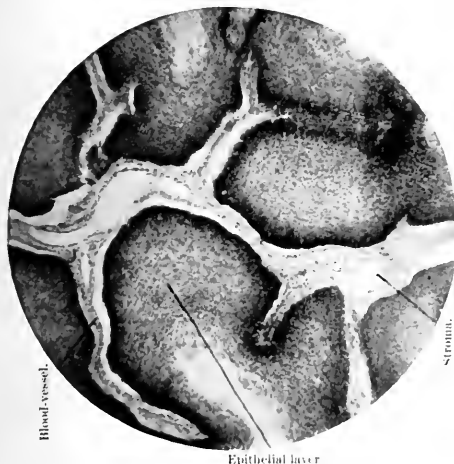


FIG. 1.—Magnified 40 diameters.

which, like the branches of a tree, never reunited, but remained free. Each part of the interstitial layer was surrounded on all sides by a greatly thickened epithelial layer.

Examined with a No. 4 eyepiece and No. 4 objective, Leitz, the appearances macroscopically were confirmed

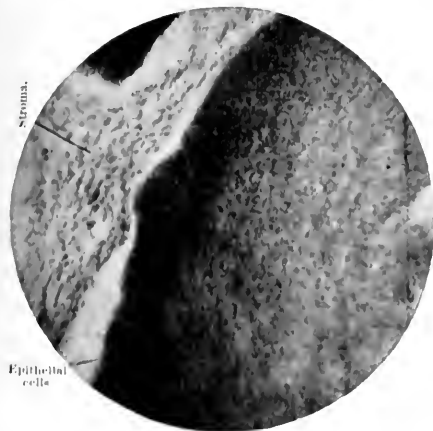


FIG. 2.—Magnified 100 diameters.

and the much thickened epithelial layer was found composed of large squamous epithelial cells, which became smaller and more compact as they approached the interstitial tissue. The central tissue, comprising the part called the interstitial tissue, was made up of fibrous

connective tissue, with long, spindle, connective-tissue cells and a few blood-vessels. No glands were found. The connective tissue was very scanty in proportion to the quantity of epithelium present.

This connective tissue and the epithelial cells we see are arranged in numerous papillae, each papilla having for a centre the scanty connective tissue, with per-

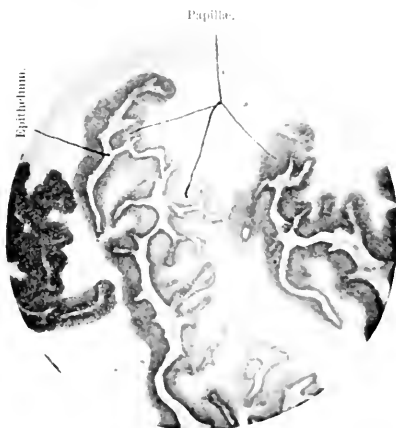


FIG. 3.—Magnified 15 diameters.

haps a small blood-vessel, and outside this layer upon layer of squamous epithelial cells. These papillae extend in every direction, and are always separate. The appearance is shown in the photomicrograph.

It is clear that the tumor is a form of true nasal papilloma, and can not be confounded with the de-

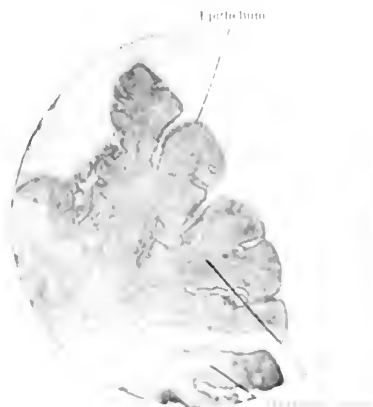


FIG. 4.—Micrograph.

scriptions of nasal papilloma. It was first found by the observer to whom I refer.

Later investigations have shown that the same data described by Heidenreich in 1887, and by others, are papilloma at all times.

gland tissue, a fibrous stroma infiltrated with leucocytes, and some interspace exudation (redema) in the fibrous stroma, and outside this structure columnar epithelial cells arranged regularly as in an ordinary mucous membrane.

This form of tumor—Hopmann's polyp, as it is now called—is the ordinary polyp process of mucous membrane which has become folded and convoluted and furrowed because of the pressure to which it has been subjected in the limited space in which it grew. If an ordinary polyp (fibroma oedematose) has filled the space and continues to grow, it *must* fold upon itself and produce the form of growth as described by Hopmann.

In an excellent paper on Nasal Papillomata, by Dr. Jonathan Wright (*New York Medical Journal*, December 26, 1891), this difference is pointed out clearly, and an illustration of a papilloma such as is described by Hopmann is shown. Dr. Wright here demonstrates that such growths can only be the ordinary polyp formation which has, from pressure, taken on a false papillomatous appearance. Dr. Wright says: "It is impossible to say how many cases of true nasal papillomata have been observed. Doubtless some of those so reported were not papillary fibromata. It is certain that only those which have been examined microscopically can be accurately classified, though some had every macroscopic appearance of a true papilloma. They evidently have a preference for the cartilaginous septum and the floor of the nose, while Hopmann's growths are more frequently found on the turbinated bones, especially the inferior—the most frequent site of hypertrophies."

Virehow says that "the pathological importance of papillary tumor is, at least so far as I know, determined by the condition of the basement substance or by that of the parenchyma of the villi themselves."

If this be so—and we all willingly bend to the dictum of the father of pathology—it is evident that the papillomata described by Hopmann are not of this class, but belong to the ordinary hypertrophies of mucous membrane which have undergone some pressure effects; while the description of a papilloma of the vocal cords will stand as an example of a true papilloma. The structure of the tumor described in this paper is exactly the same as that which describes a papilloma of the vocal cord. This specimen, then, is a true *papillary fibroma* of the nasal septum.

A SUBSTITUTE FOR THE MURPHY BUTTON.

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As allurgeon know, the principal drawback to the majority of instrument is the exorbitant price asked for them. Let them contain a hinge or a bolt and immediately a small fortune is charged for them. So, any in-

strument that is easy to make and easy to sterilize is, in my opinion, a great improvement on an otherwise complicated piece of mechanism containing numerous hollows and hinges for the harboring of bacteria during the process of sterilization. The instrument I offer as a substitute for Murphy's button, for intestinal anastomosis, is easy to make and easy to apply and easy to sterilize. The instrument consists of but two blades of forceps. Both blades are of the same size and structure, except, as in other forceps, one is a female and the other a male blade, for disarticulation and sterilization.

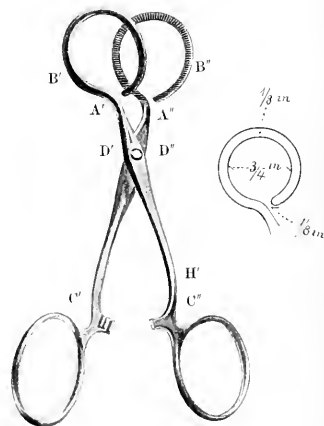


FIG. 1.

The opening at A' and A'' should be about an eighth of an inch. Both blades are triangular down to B' and B'' to give strength. The rest of the handles and the incomplete circular blades are round—about a fifth of an inch in diameter. When fixed in position the instrument is locked at D' and D'' and fixed or clasped at C' and C'', as any artery forceps.

The *modus operandi* of the operation is as follows:

Open the abdomen as usual and remove the portion

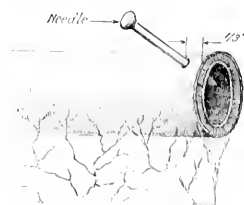


FIG. 2.

of the intestine diseased or injured. Then about a third of an inch from the cut margin of the gut, at a point opposite the mesenteric attachment, puncture a hole or cut a slit a fifth of an inch. An ordinary aspirating needle is the best instrument to use.

Now take either male or female blade, and holding

handle down, insert the end of the incomplete circular end of the blade into the hole and by a circular motion, raising the handle up always, you place the incomplete circular handle inside the gut. Then insert the other blade in the other gut in exactly the same way.

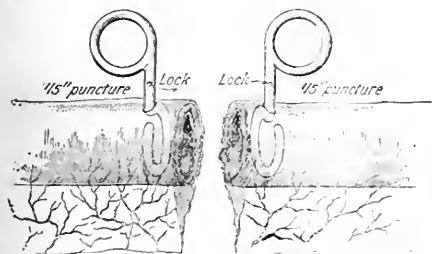


FIG. 3.

The above is a picture of both blades in place. Now invaginate the ends of each gut in upon the ring of the forceps, lock the blades, and clasp, care being taken not to clasp them too tight for fear of injuring the gut. Often the gut, after being invaginated, refuses to remain long enough to allow you to lock and clasp the forceps. In that case, which is apt to arise when assistance is not readily obtained, or is limited, all you have to do is to insert the two primary stitches of Monsel's (invaginating operation with his fenestra). But instead of using his window just thread the stitches on a needle and pass them through the fifth-of-an-inch puncture next to the handle of the male blade. Now pull on your stitches and invaginate the guts until you have your blades firmly locked. Then pull on one end of your stitch and you can remove both, as they no longer serve a useful purpose.

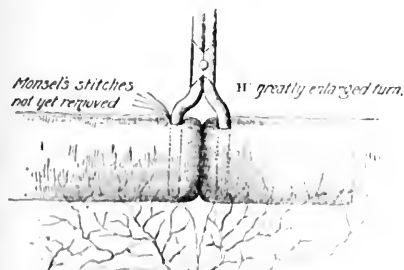


FIG. 4.

The cut shows the appearance of the forceps after being placed, locked, and clasped.

Note the slight turn of the forceps at H, to guard against pinching the gut too tight and to insure even pressure. Insert and tie all around the gut a row of Lambert sutures at will, ten or twenty if desired. I enclose your forceps until it no longer holds the cut. Do not open it more than very slightly, for one must remember not to tear the gut.

Now bring the handles of the forceps down again through the hole in the mesentery, and up again; so by this circle you can remove the forceps from the intestinal tract.

Next carefully stitch up the fenestra in the mesentery and the two little fifth-of-an-inch puncture holes, and you have finished a simple anastomosis and have left nothing foreign in the intestines.

This operation is superior to Murphy's in that no irritating body is left in the intestinal tract. The instrument is simple and inexpensive, and can be easily sterilized.

It is superior to Monsel's invagination in substituting a fenestra a fifth of an inch in diameter for his fenestra of an inch or an inch and a half. And the Lambert sutures can be made firmer and more regular, without having the gut constantly slipping away.

This instrument is superior to La Place's modification of Dr. Murphy's, in that it is simpler and easier to clean. In all other points Dr. La Place's is just as good.

The only point to be careful of is not to pinch the gut, and not to open the blades too wide when you wish to remove them. Do not stitch the cut in the mesentery until the forceps is removed.

In the operation some little points of standard usage I have omitted purposely to economize space.

THE DIAGNOSIS AND TREATMENT OF THE MORE COMMON BLADDER AFFECTIONS IN WOMEN BY MEANS OF KELLY'S METHOD.*

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So brilliant is the work Howard A. Kelly has done in the upper urinary passages that the value of his method in the diagnosis and treatment of the diseases of the bladder has not yet met with the appreciation and recognition it deserves.

For instance, in quite a recent article in the *Journal of American Obstetrics* (March, 1897), by Skene, the American Nestor of bladder surgery in women, the use of the cystoscope is recommended almost as a *dernier ressort*, when everything else has been tried and has failed. Let us quote Skene's own words on this point: "The objections to the general employment of Kelly's method are that rapid and extensive dilatation of the urethra is necessary, and that requires the patient to be anaesthetized. Taken altogether, it makes the examination really a formidable operation. Dilatation of the normal urethra is an enterprise that is not undertaken by the majority of gynecologists." The author then proceeds to describe his own method, which is a modification of Kelly's.

* REPRODUCED BY PERMISSION OF THE PUBLISHERS, THE N. Y. A. Academy of MEDICAL SCIENCE, 1900.

me how any one familiar with the method could speak of it in those terms.

As the subject matter of this paper is presented, it will be seen that general anaesthesia is rarely necessary—only once so far in the writer's experience, and that was at a time when he was still unfamiliar with the method—and that extensive dilatation of the urethra is never called for.

During the three years that I have been employing Kelly's method I have made use of the cystoscope fully five hundred times in over one hundred different women,* and I can positively assert that in not a single instance was any appreciable harm done to the urethra. The size of the cystoscope used in the vast majority of cases was that known as No. 10. Very rarely was No. 12 necessary, and No. 8 frequently served the purpose. I have never observed incontinence, even of a temporary duration, follow the introduction of the No. 12 cystoscope, and, as I have already stated, I have never had occasion to use a larger sized instrument. Even for the catheterism of the ureters I seldom use a larger cystoscope than the No. 10, and in the numerous times that I have carried out the procedure I have not thus far had to use general anaesthesia once.

To illustrate how expeditiously direct inspection of the bladder and catheterism of the ureters can be done after one has had some practice, I will cite only one example.

Last January a lady came during the office hours with a note from my friend, Dr. M. Manges, asking that I obtain for him a specimen of urine from each kidney. She was a short, stout woman, about fifty years of age, and of a nervous and anxious temperament. She never had had a similar examination and was in no way prepared for it. From the time she entered my office until she left it, with two small bottles of urine from either kidney, obtained by catheterism of both ureters, about thirty minutes elapsed. She suffered some pain for about twenty-four hours as a result of the examination, and this was the only ill effect that followed.

It may be appropriate here to say a word relative to the propriety of attaching Kelly's name to the method of direct visual inspection of the bladder as it is practiced in this country. Without desiring to enter into a discussion as to claims of priority, so much may be safely asserted, that Kelly has so simplified the technique that it becomes one distinctly apart from that practiced in Germany. No better evidence can be needed than the fact that Volz's *Handbuch der Gynäkologie*,† the most recent and authoritative work on gynecology in the German language. The article on the physical examination of the bladder is so extensive, and is chiefly

devoted to the use of Nitze's cystoscope.* It is not possible to conceive how any person who was ever familiar with a method similar to that which Kelly has introduced into this country would waste his time in describing at length so complicated a method as cystoscopy in women either with the Nitze or the Casper instrument. In Kelly's method you have simple instruments, easily sterilized, the use of which is readily learned. You inspect the object directly, and you have a hollow tube through which you may make a direct application to the bladder and pass a catheter into either ureter with the greatest ease.

In Nitze's or Casper's method you have a complicated and extensive instrument not capable of perfect sterilization, the use of which requires very long practice; you have to view the object through the medium of a fluid, and you have no means whereby you may make a direct application to the interior of the bladder.

Being once provided with the necessary instruments, an ocular examination of the bladder in women by Kelly's method becomes as easy a matter as the use of the laryngoscope, and can be just as readily learned. I grant that the exposure of the ureteral orifices and the introduction of a catheter into the ureters requires considerable practice before one becomes an adept at it, but the cases calling for such an examination are comparatively few in number and will always belong to the domain of the expert.

Kelly's cystoscopes have been so frequently described and are generally so well known that I may leave out their description here. A few practical points regarding the technique, however, may not be amiss.

The patient loosens all the clothing about the waist, and is first placed on the table in the lithotomy position. A small glass catheter is introduced into the bladder and the urine withdrawn and kept for examination if necessary. The bladder is then injected with a one-per-cent. solution of boric acid by attaching the rubber tubing of a graduated glass irrigator to the catheter and allowing about from six to eight ounces of the solution to flow into the bladder; the rubber tubing is then detached, and the solution escapes from the bladder through the glass catheter, which has remained *in situ* all the time. This manoeuvre is repeated until the returning fluid is quite clear. Then, with a short, flexible catheter attached to a small glass syringe, four cubic centimetres (one drachm) of a four-per-cent. solution of cocaine is thrown into the bladder, some of the solution being injected into the urethra by withdrawing the catheter before the syringe is completely emptied. A pledget of cotton soaked in a ten-per-cent. solution of cocaine is introduced into the meatus and left there.

The patient is now placed in the knee-chest position, the pledget of cotton is removed from the meatus, and

* It is not possible to state the number of different women examined. A large number of the women suffer from bladder trouble, and the examination is intended to be a routine and repeated in the future. It is not possible to state the number of times until the symptoms are relieved.

† Volz, 1901, p. 172.

Physikalische Untersuchungsverfahren der Harn-Blase, vol. II, pp. 172-173. Volz's *Handbuch der Gynäkologie*.

a No. 8 or No. 10 vesical speculum is introduced into the bladder and the obturator is withdrawn. It is seldom necessary to dilate the urethra prior to using specula of that size. Occasionally, however, in elderly women with marked atrophy of the external genitals, the meatus is very much constricted and unyielding, and it may be necessary to snip with scissors the posterior lip of the meatus before a speculum of that calibre can be introduced. I have always employed a small electric headlight for my examinations, but an Argand burner, or a candle even, properly placed, with a head mirror similar to that used by laryngologists, will give the required illumination.

It is scarcely necessary to say that the strictest aseptic precautions should be observed in the carrying out of the procedure.

The bladder is never completely emptied with the catheter; hence, after the speculum has been introduced the residual fluid should be removed by a suction apparatus. The whole interior of the bladder can now be readily inspected by turning the speculum in the various directions. Applications directly to the diseased parts may now be made under the full aid of sight. Considerable pain is experienced by the patient in expelling the air which has rushed in to distend the bladder. To avert this, Kelly advises that the patient be carefully lowered and allowed to resume the horizontal posture with the cystoscope *in situ*, through which the air will again pass out. I have latterly availed myself of this suggestion, and have found that the patients suffer much less from tenesmus immediately following the examination.

In women bladder disturbances of greater or less severity are very common, so much so that it is seldom a woman will make complaint of micturition being too frequent unless the act occurs oftener than once an hour and is attended with pain and tenesmus.

The anatomical feature—the shortness and comparative straightness of the urethra in women—which makes them less prone than men to urethritis, accounts for their greater disposition to cystitis. The contiguity of the urethral opening to the vagina, and consequent infection from uterine and vaginal discharges; the exposure of the bladder and urethra to traumatism during labor; the frequency with which catheterism has to be done during the puerperium and after gynecological operations; the frequency of pelvic inflammations and displacements of the uterus which more or less involve the anatomical relations of the bladder; the periodic engorgement of the pelvic vessels, including those of the bladder, during menstruation, are all fruitful sources from which bladder disturbances may arise.

The most frequent condition met with is that which formerly was known as *irritable bladder*. Since the urine, as a rule, is normal in these cases, the term vesical pathology was assigned to the condition. At one time it would be looked upon as a mere manifestation of

hysteria, at another as an accompaniment of a fancied anteflexion of the uterus, at a third as a reflex symptom of uterine or rectal disease. Then, again, in another class of cases, some constitutional disease, especially malaria, was invoked as a causative factor. Kelly's method of direct inspection changed all this. It is now known positively that in the vast majority of cases the symptom is dependent upon a localized hyperemia of the bladder, usually involving what is known as the trigonum. The term *trigonitis*, not a happy selection, has been applied to the affection.

On cystoscopic examination the whole bladder surface may be found perfectly normal until the area bounded by the two ureteral orifices is brought within view. Here small irregular patches of a bright red color will be seen. They may involve the whole of the trigonal area, or be limited to the interureteral space. In these examinations one must bear in mind that the trigonum normally is more vascular than the remainder of the bladder. Hence one must not mistake the normal hyperemia of the part for disease, an error which can be guarded against with a little practice in healthy cases. The patches, as a rule, are well defined; occasionally they merge one into another, forming a single patch of larger size which covers the whole of the trigonal area. In another class of cases the red areas may be most marked immediately surrounding the ureteral orifices. When only one ureteral orifice is involved a suspicion of a tuberculous process in the corresponding kidney must be entertained—but of this later on.

Occasionally the vault of the bladder will present similar red patches. Kelly states that a little patch of hyperemia is always produced on the posterior vesical wall on withdrawing the obturator from the end of the speculum. This might be mistaken for a pathological condition. The error can be guarded against by noting its situation, which will be directly opposite the point of the cystoscope. On withdrawing the obturator it is always prudent, therefore, to inspect the bladder surface in the field of vision before changing the position of the instrument.

As already hinted at, the urine usually is perfectly normal.

This condition of localized hyperemia may be met with in association with the most varied pelvic affections; or, it may be seen, as it frequently is, independent of any other disease.

The Treatment.—Formerly the "irritable bladder" was the *hôte mûre* of the physician. It brought into reputation almost every drug in the pharmacopœia, and even a *dermocaust* of an artificial vesical fistula was made so that the urine could be entirely drawn away. Now, with Kelly's cystoscopic, reflex applications of a few centesims of cocaine to the ureteral orifices, and directly to the red patches, almost any case of *trigonitis* can be cured. I have yet to meet with a case that will not respond to this form of treatment. The next step, if the first fails, is to have treated

over fifty cases, and it was seldom the applications had to be made more than half a dozen times. In the majority of instances the symptoms were relieved permanently after the second or third application. For the twenty-four hours after the first treatment the symptoms were usually aggravated, but so marked is the relief subsequent to that that the patients invariably come back for treatment.

The ages of my patients varied from sixteen to sixty-five.

The following case illustrates how readily the treatment may be carried out in subjects the least promising:

The patient gives her age as fifty-six, but looks fully sixty-five. She is short, very corpulent, and is extremely nervous and awkward. For two years she has been suffering from painful and frequent micturition; she is obliged to get up four or five times during the night, and micturates every half hour or hour during the day. Various remedies have failed to give her any permanent relief. Lately the symptoms have been growing worse, making the patient very nervous and irritable. My office nurse experienced some difficulty in getting the fat old lady on the table in the proper knee-chest position. I made a rapid examination with a No. 10 cystoscope, without prior dilatation of the urethra, and found a number of red patches in the trigonal area. A solution of five-per-cent. of nitrate of silver was applied directly to the patches by means of a long, slender stick with absorbent cotton wrapped around its end. Four applications in all were made, at intervals of five and six days. The patient was then completely relieved from her former distressing symptoms, and has remained so now for five months. She was referred to me by Dr. J. W. Holfarth.

Next in frequency to irritable bladder, or, more correctly speaking, hyperæmia of the trigonum, comes catarrhal cystitis. In this affection our analysis of the urine usually affords us the means of forming a diagnosis. But not infrequently it is important to know whether the pus cells and blood-corpuscles found in the urine come from the bladder or from the kidney.

Microscopists tell us that they are always able to supply us with this information. The writer regrets to say that in his experience the information obtained from the microscopist has not always been reliable, and in several instances has been defective in clearing up the points in doubt.

The following case will serve to forcibly illustrate the unreliability of the microscopic examination, while showing at the same time the great therapeutic value of direct applications to the affected portions of the bladder in cystitis.

In the autumn of 1895 a patient suffering from an obscure vesical ailment was referred to me by Dr. C. W. Bohm. She was thirty-one years old, had been married ten years, and had never been pregnant. When she was twenty years of age she had pain across the lower dorsal region, and was supposed to have kidney disease, for which she was treated for several months. Had at that time oedema of the hands, feet, and face. The

hands and feet swell occasionally even now. A year after marriage she had a vaginal discharge which persisted for a long time. Four years ago she first began to suffer with painful and frequent micturition. These symptoms persisted with varying severity until the present time. At various periods she would have to keep to her bed for weeks at a time. For the six weeks prior to consulting me her bladder disturbances had grown very much worse. She had to keep to the house, for the most time remaining in bed. Lately blood in fairly large quantities was passed at the end of each urination. She had lost over ten pounds in weight and had become very nervous and hysterical. At first her bladder symptoms were supposed to be due to antelexion of the uterus. This organ, consequently, had been subjected to dilatation several times, and various kinds of antelexion pessaries tried. Then irrigations of the bladder had been employed, giving only temporary relief. She had gone the rounds of the specialists, all of whom tried something else with equally futile results. Finally, cystotomy was advised, and it was while the patient was trying to make up her mind to submit to this operation that she came under my care.

She was a tall, thin blonde, moderately anæmic, with a face wearing an expression of acute suffering. The kidneys were not palpable. The uterus lay in normal anteversion, was freely movable, and the cervix was irregularly torn on the right side. The annexa were apparently normal. The report of a pathologist of the microscopical examination of the urine was as follows: "Slight acid reaction; no albumin; large quantity of pus; a few red blood-corpuscles, a number of epithelia, suspicious of a growth. *Diagnosis* uncertain; may be papilloma of the bladder or pyelitis."

At this period (September 10, 1895) I was not yet very familiar with the use of the cystoscope. Hence the first examination was made under anaesthesia in the dorsal position. I was not certain whether I had seen the ureteral orifices. In the neighborhood of what I took to be the left ureteral orifice I saw a narrow streak about five millimetres long, from which blood was seen oozing. The whole of the trigonal area was intensely injected; the base and fundus of the bladder appeared normal, except that the vessels were unusually prominent and large. I was unable to catheterize the ureters from lack of experience, and, not being certain but that the blood seen oozing from the narrow line came from one of them, I sent a second specimen of urine to the pathologist with a report of my examination of the bladder. His second report was as follows: "Reaction slightly acid; large amount of albumin, due, however, to the presence of blood, from which the urine could not be separated. The microscope shows a large number of blood-corpuscles, but no pus cells; amorphous and granular matter, probably urates. Many epithelial cells of various kinds, very likely coming from the pelvis of the kidney." The probable diagnosis this time was a malignant growth in the kidney. From this time on (the first examination) I was enabled to examine the bladder without anaesthesia, the patient being in the knee-chest posture. I could now see distinctly that the blood came from the surface of the trigonum, and not from either ureteral orifices. I made a direct application of a five per-cent. solution of nitrate of silver to the whole of the affected area. At the next visit, five days later, the patient expressed herself as never having received so much relief from any form of treatment as she had from the preceding one. The

treatment was kept up for about six weeks (September 10th to October 29th), the applications varying in strength from a five-per-cent. to a ten-per-cent. solution of nitrate of silver, and made at intervals of from five to seven days. At the end of this time the patient could sleep the night through without urinating. During the day she could retain her urine for from four to six hours at a time. The bladder became perfectly normal in appearance, and the urine was free from any abnormal elements. The patient gained in weight, acquired a good color, and, from being a nervous, melancholic woman, became placid and cheerful. She has remained perfectly well ever since, and is one of my most grateful patients.

I have given the history of this case rather at length because it was very instructive to me, and because also it is typical of many cases I have treated since then, all with the same satisfactory results. The case emphasizes a feature of cystitis which is not generally known. It is commonly supposed that in cystitis the whole mucosa is equally affected. This is very seldom the case. As a rule, the disease is found in patches, with healthy mucosa between. At times there may be only one fair-sized patch; at other times there will be several small patches, usually distributed over the posterior wall of the bladder and over the trigonum.

Not infrequently small superficial ulcers, varying in size from that of a split pea to that of a ten-cent piece, will be seen in the affected area. After a little experience the eye is enabled to distinguish these from tubercular ulcerations. They appear more superficial, their surface is not so thickly coated, and no tubercle papules are seen in the vicinity.

It is not necessary for me to state that in these cases of catarrhal cystitis a suitable diet and regimen should be prescribed in addition to the local treatment. In the most severe cases, at the commencement of the treatment I frequently order suppositories of opium and a mixture containing benzoate of sodium and extract of hyoseyamus.

I have met with two cases which, for want of a better name, I must designate as *hamorrhagic cystitis*. They both were observed in pregnant women, the one in the third month of the ninth pregnancy, the second in the fifth month of the seventh pregnancy. The quantity of blood in the urine was out of proportion to the subjective and objective symptoms. In the one case there were a few red patches in the trigonal area, in the other the vessels at the base of the bladder were enlarged and tortuous. In both the blood rapidly disappeared from the urine after a few direct applications of a five per cent. solution of nitrate of silver.

One of the patients has recently returned, after the lapse of a year, suffering anew from frequent and painful micturition. These symptoms set in about six weeks ago. There has been no further hamaturia, but the local signs are suspicious of tuberclosis.

We now come to a class of cases which, though com-

paratively rare, are more often met with at the present time, when our means of diagnosis have been improved by the method of direct inspection. I refer to tuberculous disease of the bladder as a primary affection. Dr. Edward Reynolds* has reported four cases. Dr. J. O. Polak† described one case, and recent literature contains several other cases.

I myself have met with two cases during the past three years. One case passed from under observation after a short time; the second is still under treatment and is worthy of a brief description, as it demonstrates what local treatment may do even in these cases.

Mrs. S. came under my care December 14, 1897. She was forty-seven years old, had been married twenty-nine years, had eleven children and one miscarriage. Last child was thirteen years old. There is no tuberculous history in the family. Her menses were still regular and normal. For six years she had been suffering from frequent and painful micturition. Latterly the symptoms were growing more severe and were worse during the night, when she would be compelled to get up every ten or fifteen minutes. During the day she could hold her urine for half an hour, or sometimes for an hour. The act of micturition was attended with considerable pain and tenesmus. So far as she knew, she had never passed blood with her urine.

On cystoscopic examination the trigonum was normal in appearance, as were also both ureteral orifices, which were seen to emit jets of clear urine. On the posterior wall of the bladder, a little to the left of the median line, and some distance from the trigonum, was an elongated patch of intense redness. The patch looked at first like a streak of bright blood, but it could not be wiped away. The vessels immediately surrounding the patch were intensely infected. The right half of the vesical mucosa appeared normal. At a subsequent examination, a short time later, six small, pale papules about the size of a pin's head were seen distributed about the trigonal extremity of the patch. A diagnosis of tuberculous cystitis was made. A specimen of urine with some of the scrapings from the surface of the affected area were then sent to Dr. Harns-worth, House Physician of the Mount Sinai Hospital, who kindly made a bacteriological examination and found a few tubercle bacilli.

Weekly applications were made of nitrate of silver, beginning with a five per cent. solution and increasing up to a forty-per cent. After a half dozen applications the symptoms markedly improved, and I did the local signs. The patient did not have to get up during the night oftener than once in four or five hours, and the day she could easily hold her urine for two or three hours. The pain attending the act of urination had almost entirely disappeared. There has been no further passage of blood in the urine, and no micturition; she still has to get up several times during the night, and cannot retain her urine for a longer period than four hours during the day. With a few interruptions, the treatment was continued for a total of twelve weeks. I have not varied the mode of treatment, but have increased the concentration of the solution from five to fifty per cent. and have used the nitrate of silver with good results. I am confident that the patient will

* American Medical Association, 1895, p. 13.

† American Medical Association, 1895, p. 13.

glycerin for a long period. The application was painless, but I did not observe much improvement in the local condition under its use. The best results seemed to be derived from strong solutions of nitrate of silver and from a twenty-five-per-cent. solution of ichthyol in glycerin. At the present time the red patch has about entirely disappeared, but fresh tubercles appear in the vicinity from time to time. At no period during my observation of her has ulceration in the affected area taken place.

The situation of the tuberculous process will explain why it was that the patient suffered more while in bed than when up and about. In the recumbent posture, as soon as a small quantity of urine collected in the bladder, it would reach the affected area and excite a desire to urinate. In the erect posture, on the other hand, the urine could collect at the base of the bladder for some time before it would reach as high as the diseased part.

When evidences of tuberculosis are observed in the bladder the greatest care should be taken to exclude renal tuberculosis, for in the majority of cases the bladder becomes secondarily infected from a lesion in the kidney. The opposite holds good also—cases in which the tuberculosis primarily develops in the bladder and ascends to one or other kidneys or to both. In the first class of cases the tract of infection may frequently be traced. The mouth of the ureter of the affected kidney will be swollen and very much reddened, and if there be further involvement of the bladder it will at first be seen in the neighborhood of the ureteral orifice. A marked injection about the ureteral meatus, with the remainder of the vesical mucosa perfectly healthy, is very suspicious of tuberculosis of the kidney of that side. L. Casper* and Willy Meyer† have each diagnosed an early tuberculosis of the kidney from this local sign, and the diagnosis in both instances was substantiated by a subsequent nephrectomy.

The writer‡ has reported a case of nephrectomy for early tuberculosis of the kidney in which the diagnosis was made by finding a stricture of the ureter about an inch from the bladder.

In the above-reported case of vesical tuberculosis fresh papules, few in number, appear from time to time. Each new crop seems to be advancing nearer toward the left ureteral orifice. The writer is watching the case with the most intense interest, and if later developments bring forth any fresh points of interest he will publish them in a future communication.

751 MADISON AVENUE.

The Medical and Surgical Society of the District of Columbia.—At the last regular meeting, on Thursday, January 5th, the following papers were to be read: The Examination of United States Volunteers, by Dr. Hunt; Sarcoma of the Testicle, by Dr. Kohler.

* *Berlin, Klin. Wochenschrift* for April 27, 1896.

† *Medical News*, May 1, 1897.

‡ *Medical Record*, February 3, 1898.

SARCOMA OF THE NASAL SÆPTUM.*

BY J. PAYSON CLARK, M. D.

THE number of reported cases of sarcoma of the nasal passages is still sufficiently small to rank this among the less common nasal affections and to make of value complete reports of all observed cases. Bosworth, in 1889, had collected forty-one cases, about half of which were sarcoma of the septum. In a paper on sarcoma of the nose in 1891 I added seven cases to this list, and Boylan, in 1896, added fourteen more. Since 1896 I have found references to fourteen cases, but have been able to consult the reports of only ten. Boylan says of the twenty-one cases which he collected (seven of which were mentioned by me in 1891) that in two cases no operation was attempted, in two it was admittedly incomplete, leaving seventeen in which extirpation was attempted. Of these, two are recorded to have died of recurrence, and in five no subsequent history is referred to. In seven, the length of time the case was observed after operation is not given. In only three is it distinctly stated that there was no recurrence a year or more after the operation. In Boylan's case the growth, a spindle-celled sarcoma, was removed by means of a snare, and the site on the lower turbinate thoroughly curetted. There was no sign of recurrence over a year after the operation. In the ten cases since 1896, the records of which I have been able to consult, seven died of the disease, and one (Bliss's second patient), although living at the time of the report, was in such poor condition and presented such an extensive growth that operation was thought inadvisable, while another (Nichols's Case III), in which the growth was also very extensive, was lost sight of. The one which recovered (G. M. Black's) was a woman of thirty-eight with an alveolar sarcoma of the right middle turbinate, which was removed by means of the snare and curette. There had been no recurrence over two years later. In one of the seven fatal cases no operation was attempted. This case (Scheppegrell's) was in a man, fifty-six years of age, with a round-celled sarcoma of the quadrangular cartilage. The growth was so extensive that operation was not considered justifiable. In another fatal case (Bliss's), that of a boy, aged four years, the growth was so extensive that only a palliative operation was attempted. Following are brief reports of the five remaining cases:

Bonain: A boy of thirteen years had a polyp of left inferior turbinate removed by snare and pedicle destroyed by galvano-cantery. The polyp (there is no record of its microscopic character) recurred in the course of a year and was treated in the same manner. Six months later the left nostril was occluded by a soft, dark-red tumor from the lower turbinate. This was thoroughly removed, but recurred in four weeks. Further operation was refused, the growth increased rap-

* Read before the American Laryngological Association at its twenty-sixth annual congress.

idly, and the patient died a year and ten months after being first seen. The growth was a myxo-angio-sarcoma.

Onodi: A man, aged fifty, had both nostrils filled with apparently benign polypi, which were treated with snare and cautery. The left nostril remained free, but the right refilled in several months. Some of the recurrent growths did not differ in appearance from rather dense polypi, while those on the middle turbinate had a suspicious appearance and were found on microscopic examination to be round-celled sarcomata. All growths were removed and suspicious-looking places cauterized. Ten months later there was no sign of recurrence, but eleven months after this the right nostril was again filled with the growth. A radical operation was advised and performed (two years and a half after the patient was first seen for polypi). The patient died two months later from a rapid recurrence.

Greene: A woman, aged thirty-two, had nasal stenosis, with pain and frequent epistaxis. A growth discovered between the middle and lower turbinates on the right was removed with forceps. Three months later the growth had extended to the orbit and ethmoid. No radical operation was attempted, and the patient died five months after she was first seen. The tumor proved to be a mixed sarcoma and carcinoma.

Nichols: 1. A woman, aged twenty-seven, had a polyp (?) removed from the left nostril one year before. When first seen by Nichols the growth was very extensive, involving left antrum and sphenoidal cells. An extensive operation was done, and later antitoxine treatment was tried without avail, the patient dying three months after the operation. 2. A girl, aged seventeen, had obstruction of left nostril for several months. A dense tumor (myxosarcoma) filled left nostril. It extended into the antrum and ethmoid cells. It was removed by snare and sharp spoon and ethmoid cells curetted. For six months the patient was well, then the growth recurred in the sphenoidal region. The tumor was removed as thoroughly as possible, and the patient remained in good condition for a year. Then the growth recurred, increased with great rapidity, and resulted in death a little less than two years after the first operation.

The case which I have to report is one of sarcoma of the nasal septum. I shall take this occasion to give also the subsequent history of a similar case which I reported in the *Boston Medical and Surgical Journal*, September 3, 1891. A brief résumé of the history of this case as then given is as follows:

G. W., aged thirty-five, was first seen by me in July, 1890. He first noticed obstruction of the left nostril three months before. This nostril was found to be filled with a bluish-gray mass. This was removed in several sittings by means of a cold-wire snare. One month after this operation (September 29th) the mucous membrane appeared everywhere normal. There was nothing to show where the tumor had been attached. But a month later a small, rounded elevation was seen on the septum near the posterior border, and two weeks after a growth of the size of a large bean was removed from this site. The patient was kept under observation during the winter. The growth showed little tendency to increase, although it never disappeared entirely. On May 2, 1891, a recurrence the same size as the last was removed. From this time the growth began to be more rapid, but

it was not until January, 1892, that I concluded that the snare and curette were inadequate for its thorough removal. Then, at my request, Dr. J. C. Warren removed the whole septum under ether, having first laid the nose over on to one cheek (Brun's operation), in order to get at the septum better. Dr. W. F. Whitney reported: "Septum thickened by a spicula-looking formation of bone, on the outside of which was a soft, grayish, more or less translucent new growth—osteoid sarcoma." The whole septum showed this appearance. Dr. Warren went as high up in the nose as possible, but the disease went farther. The course of the disease from this time on was very rapid. The growth soon involved the left orbit, destroying vision in that eye. It also appeared in the scar of the operation in a cauliflower mass. The patient suffered from severe headaches and occasional severe hemorrhages from the nose. He became dull and stupid, and when last seen, in June, 1892, it was evident that he had not long to live.

Mrs. W. H. M., aged forty-two, was first seen by me June 1, 1897, when she gave the following history: Her father had a cancer of the lip removed eight years ago and is now living, aged seventy-five. Her only sister died three years ago of cancer of the liver. Her maternal grandfather died in old age of cancer of the stomach. The patient has always been well. Has eight children living. Lost one in infancy. About two years ago she noticed that the left nostril was obstructed, and soon perceived a "lump" in the nostril, which bled easily. There was a disagreeable nasal discharge. Examination showed a dark, reddish-gray tumor filling the anterior portion of the left nostril, also visible by posterior rhinoscopy. This growth was removed in several pieces by the cold-wire snare. It was very friable, but did not bleed profusely. After the growth had been thoroughly removed, it was seen to have been attached to the cartilaginous septum by a pedicle about a centimetre in diameter, nearly opposite the lower border of the middle turbinate. At the site of the attachment of the growth was an area of cartilage denuded of mucous membrane, not quite a centimetre in diameter. Dr. J. H. Wright, the resident pathologist of the Massachusetts General Hospital, gave the following report: "The growth consists for the most part of small cells with long branching processes forming a loose reticulum, in which a mucinlike material is present, as shown by a bluish staining with hematoxylin. In places this tissue merges into a hyaline semi-fibrillar substance, which seems to represent degenerate tissue. There are also areas made up of small, oval, nucleated cells closely packed together. A few thin-walled, atypical blood vessels are present. Diagnosis: Myxosarcoma." As the patient lived at a great distance, and could not therefore be under observation, it seemed best to remove the site of the growth, together with considerable surrounding tissue. This operation was done by Dr. S. J. Mixer on June 19th. A triangular incision was made over the bridge of the nose, the cartilage sawed through with a fine saw, and the nose turned down over the mouth. Most of the cartilage, and part of the bony septum was removed with the osteoid forceps. The nose was replaced and the patient made a good recovery. The portion of the site of removal showed no evidence of sarcomatous growth. The report was seen again on September 29th. Several months and slight epistaxis. Examination revealed no evidence of recurrence. A small polypoid mass of mucous membrane at the junction of the nostril with the alar wall, with the

floor of the nose was removed and examined microscopically. It was "hypertrophied mucous tissue." A letter from the patient's doctor dated March 28, 1898, says that there is at the junction of the septum remains with the floor of the septum a little enlargement, but this has not changed in size or appearance. This is undoubtedly the same "hypertrophied mucous tissue" mentioned above. Otherwise the septum looked well.

On the aetiology of nasal sarcoma the cases which I have here collected throw no new light. It would seem at first as if three of these cases lent support to the theory that myxoma may become converted into sarcoma. However, in Bonain's case there was no microscopical examination of the so-called polyp, which besides grew from the lower turbinate, a very unusual site for polypi. There was no microscopic examination of the polyp in Nichols's case, besides which the whole history in this case seems to indicate that the growth was malignant from the first, while in Onodi's case there is nothing to show an aetiological connection between the polyp and the sarcoma. They seem rather to have originated independently. It seems to me, after a study of the literature, that we are no longer justified in assuming that sarcoma in the nasal passages is less malignant than in other localities. It is less malignant only in so far as it may be in a situation to be thoroughly eradicated. The case of G. W. indicates well the extreme malignancy of the round-celled variety; and while Bosworth's statement, that the intermingling of normal tissue elements renders the prognosis less grave as the proportion of normal elements increases in the tumor, is undoubtedly true, still we should not be led into giving a favorable prognosis in any case because we find a mixed growth. That such a mixed growth may be extremely malignant, Bonain's and one of Nichols's cases (myxosarcoma) show. As regards treatment, I think no one will deny, in the light of the subsequent history, that the only chance for the eradication of the sarcoma in the case of G. W. would have been the removal of the whole bony septum when the patient was first seen. The slow growth of such a neoplasm should never deceive us as to its real malignancy, or lead us to adopt any half-measures in treatment, because the history of many cases shows that an apparently quiescent sarcoma may suddenly and without any warning take on a terribly rapid growth. Given a round-celled sarcoma on a structure like the nasal septum or one of the turbinates, it should be removed at once, together with a wide margin of normal tissue. If the sarcomatous elements are mingled with normal tissue elements, as in fibrosarcoma, myxosarcoma, etc., one may be justified in attempting their removal by means of the snare and curette, provided the patient can be seen often and the part closely watched for any recurrence. But in case the patient lives at a distance, or for any other reason can not be under the watchful care of the physician at frequent intervals for one to two years, a radical operation should be performed at once in the case of a round-celled sarcoma. The condition

of the septum in the case of Mrs. M. showed that a snare and curette would have probably entirely removed the growth, but under the circumstances I did not feel justified in taking the risk.

The performance of such an operation does not dispense with the subsequent close watching of the nasal cavity, when that is possible. In case of recurrence after an operation with snare and curette no further attempt should be made to operate in this manner, but a radical operation should be at once resorted to. In view of the horrible condition of the patient who dies of this disease, it certainly seems far preferable to perhaps remove too much normal tissue at first than to suddenly discover that the disease has extended beyond the reach of the surgeon's knife.

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Note.—The writer has been unable to obtain the last four articles referred to.

THE TREATMENT OF PNEUMONIA.

By SIMON BARUCH, M. D.

AN essay on the State of the Vasomotors in Lobar Pneumonia, and its bearing upon Treatment, which appeared in the *New York Medical Journal* for October 8, 1893, presents the important subject of treatment in an interesting light, because it differs widely from the usual crude or empirical views found in our literature.

The paramount import of the vasomotors is clearly set forth by the author, and an attempt is made to deduce a correct treatment from the ascertained conditions, viz., the relaxation of the peripheral vessels. The able author refers to Romberg's and Passler's experiments with injections of pneumococci into the circulation of

rabbits, which demonstrate the import of vasomotor involvement. This is of special interest to me, because he confirms my clinical observations of the past ten years, which were offered to the New York Academy of Medicine not long ago.* In this essay the following statement was made: "Romberg has recently confirmed what I have several years ago and repeatedly since that time insisted upon, that in acute infectious diseases we encounter disturbances of the circulation which manifest themselves clinically as reduced tension and diminished filling of the arteries, and which are commonly described as heart failure. Undoubtedly the condition of the peripheral vessels bears a very large share in the production of cardiac inadequacy, as I have sought to impress when explaining the *rationale* of cold applications in typhoid fever and pneumonia. Romberg has shown by experiments with injections into rabbits of Fraenkel's diplococci that the circulation is damaged by a paralysis of the vasomotor, while the heart itself remains unaffected." That the same condition of the peripheral vessels exists in lobar pneumonia is demonstrated by the clinical observations of Van Santvoord, who found that "chloride of barium in doses of four grains every four hours produced in one case a material contraction of the very much relaxed arteries, the pulse slowed, and the marked delirium and prostration of the patient disappeared, although the temperature and pulmonary lesion remained unchanged. In other cases no material result followed the same treatment." The fact that "strychnine, which is now so widely used, not only has a tonic effect upon the heart, but also causes contraction of the peripheral vessels, through its action upon the spinal vasomotor centres, which, according to Romberg, are not affected by the pneumococcus," is also cited in support of the theory that a relaxation of the peripheral vessels in pneumonia exists. The author states that "the most obvious method of combating extreme dilatation of the peripheral vessels" (to which he justly attributes cardiac failure) "is to administer drugs which cause their contraction." Inasmuch as he clearly states that in only one case out of several the drug, "which has been proved to act on the peripheral vasomotors," really produced any improvement, there seems to be little hope of discovering a more efficient one.

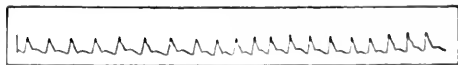
Shall we confine our search for such remedial agents to drugs whose action at best is either unreliable or connected with some undesirable effect? Clinical observation has already demonstrated conclusively that we may find outside of pharmacy a most potent agent for this purpose in cold applications to the cutaneous surface, which presents an enormous "peripheral circulation." My advocacy of this therapeutic agent is, however, not based upon clinical experience alone. I agree with Horatio Wood that "therapeutics developed by empiricism or clinical experience alone can not rest upon a

secure foundation. Experiments upon the lower animals or upon healthy human beings are the only rational scientific groundwork for the treatment of disease." Roehrig has shown by experiments on frogs that feeble cutaneous irritants enhance the normal tone of the circular muscular fibres of the vessels, and that intense irritants permit a relaxation of these muscular fibres. This has been confirmed by Naumann and others. These observers have shown that *weak* cutaneous irritants produce a narrowing of the small arterioles, with a rise of pressure, in consequence of which the resistance at the periphery is enhanced, and thus the heart is made to contract more rapidly. *Intense* cutaneous irritants, on the other hand, fatigue and paralyze the normally existing innervation of the blood-vessels, which emanates from the medulla oblongata, and therefore produce a relaxation and dilatation of the peripheral arterioles, with diminution of pressure. That the toxic agents circulating in the blood in certain infectious diseases belong to the latter class has been demonstrated by Romberg and Paessler. That the application of cold water to the cutaneous surface belongs to the former class (feeble cutaneous irritants) has been demonstrated by Winternitz.

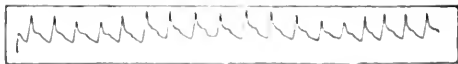
From these demonstrated facts a rational treatment of pneumonia has been deduced, to which the attention of the medical profession needs to be directed.

The application of cold water to the skin produces, like other mild cutaneous irritants, a narrowing of the cutaneous vessels, which, followed by their tonic dilatation during reaction, causes the blood pressure to rise and improves cardiac action. The sphygmograph demonstrates that this dilatation of the peripheral vessels, following their narrowing in reaction, is not accompanied by loss of tone and is not passive, as is illustrated by the following tracings:

No. 1 represents the pulse of a man who had been smoking excessively. It shows a pulse of low tension, considerable diastolism, small tidal wave, evidencing feeble ventricular action, indicated by a slanting and low up-stroke, and a somewhat obtuse per-recession wave. The pulse was 90, respiration 18, and temperature 99.4° F.



This man was subjected to a full bath at 80° F. for twelve minutes, with the result of completely changing the character of his pulse. The tension is shown by the subjoined tracing, taken after the bath, to be decidedly improved; it shows a marked tidal wave, very moderate



diastolism, a quick vertical up-stroke, and a per-recession wave. The pulse was reduced to 72, the temperature to normal, and the respiration now increased to 21.

* The Management of Pneumonia Patients. *Medical News*, January 9, 1897.

I have for many years expressed the belief that this tonic effect upon the heart is due to the fact that the peripheral vessels possess the power of propelling the blood through these fine tubes, and thus bear a larger share in the circulation than is commonly suspected. This effect I have long claimed is enhanced by the application of cold water to the skin, which produces first a contraction and subsequently a tonic dilatation, with increased contractility of the walls of the fine peripheral vessels, relieving the heart enormously, and freeing it from the added labor which threatens to exhaust it in infectious diseases, in which there is a loss of this propulsive power, due to passive relaxation of the peripheral vessel walls, by which normal resistance is removed. Professor Hobart A. Hare demonstrates his great aptness as a teacher by the ingenious comparison of the heart to a locomotive.* He says, correctly, that the vasomotor system is made up, on the one hand, by the vasomotor nervous apparatus, and, on the other, by the blood-vessels themselves. The resistance offered to the heart by the properly acting vasomotor nervous system, through its influence on the vessels, is identical with the friction offered to the driving wheels of a locomotive. The locomotive is intended to meet and stand any resistance, but when the latter is removed by slippery rails the wheels fly around ineffectually, racking the machinery and destroying its usefulness. He maintains justly that "a rapid pulse may be due in no way to a disordered heart, but to vasomotor relaxation, and that the proper treatment is to put sand on the track to increase the resistance, and not to make more steam—or give digitalis—which will only cause the engine or heart to work away on slippery rails, with more wear and tear and no progress." *The cold bath increases the resistance.*†

That the explanation of the action of cold hydropathic procedure in infectious diseases which I have given is correct, has recently been confirmed by Dr. Woods Hutchinson,‡ professor of comparative physiology in the University of Buffalo, who argues ingeniously from comparative anatomy the existence of elasticity in the peripheral vessels, which aids in propelling the blood onward, and states that the calibre of the arteries and arterioles, particularly the latter, varies very considerably from time to time, so as markedly to influence the flow of blood to the part supplied by them, and that these changes of calibre are brought about by the vital contraction or relaxation of the firm and powerful muscular wall, which extends from the largest arteries down to the mouths of the very capillaries themselves.

Hutchinson concludes: 1. That the existence of active contractility upon the part of the muscular wall

of the arteries and arterioles, and in less degree of the veins and lymphatics, and of the capillary epithelium, is something which we have the strongest reason to expect upon ancestral ground in even the highest animals.

2. That the beneficial effects of cold water upon the circulation, accompanied by friction, as in the Brand method of typhoid fever, are adequately to be explained only upon the ground of the persistence of such a power in our mammalian "skin heart."

3. The occurrence of this sort of contraction is almost universal in invertebrates (having been seen even in the higher vertebrates—the wing of the bat, and the ear of the rabbit), so that we have abundant ground for the possibility and some even for the probability of its occurrence in our own species.

Thus theory, experiment, and logical reasoning have confirmed the clinical observation of those who resort to cold hydropathic procedure in infectious diseases. Even if the temperature is not materially reduced by them, the pulse almost always demonstrates improved heart action. The application of these principles to the therapy of pneumonia has been of great interest to me. Careful observation at the bedside during the past ten years has brought me to the abandonment of the cold, full bath, chiefly because it is too disturbing to the patient, and the latter does not require it, because there is not usually a serious involvement of the nervous system, and also because the body cools very rapidly in this disease after any decided cold procedure. I have therefore substituted a more mild procedure—the wet chest compress. The latter consists of several layers of old linen cloth, wrung more or less out of water at 60° or more, and repeated every half to two hours, according to the patient's condition and temperature, applied snugly around the entire chest, and covered with flannel. This has in my hands proved quite sufficient to produce all the effects of cold water. The first effect of such a compress is a shock to the peripheral nerves, followed rapidly by a reaction which is conveyed to the central nervous system, and thence reflected to the lungs, causing deeper inspiration and increased expectoration; to the heart rendering the pulse slower, more tense, and resisting. When the compress becomes heated by contact with the hot skin, evaporation through the flannel covering ensues, causing heat diffusion and consequent local cooling. Removal of the compress produces a repetition of the shock and reaction, with the same effect upon the respiratory and vasomotor centres.

No drug is capable of accomplishing the same result. I am not averse to the use of drugs, and often resort to hypodermics of strychnine to tide over temporary cardiac inadequacy, but I depend almost entirely on the cold compresses to meet the most pressing indications of improving the circulation and respiration, increasing renal elimination and reducing temperature. Since alcoholic stimulants produce in large doses the same conditions of the cutaneous vessels as the injection of the

* *Therapeutic Gazette*, vol. xii, No. 2.

† *The Principles and Practice of Hydropathic*, by Simon Baruch, M. D., p. 119.

‡ *The Skin Heart*, *Boston Medical and Surgical Journal*, November, 1897.

pneumococcus produces, I do not resort to them, except in alcoholics to whom they have become a daily necessity.

The lessons of Dr. Van Santvoord's admirable essay are that drugs are demanded to counteract the dangerous relaxation of the peripheral vessels, and that drugs have thus far failed to accomplish this desirable result. The lesson I desire to emphasize is that the cold, wet compress, judiciously adapted to each individual case of pneumonia, not only restores the tone of the relaxed peripheral vessels, but possesses other therapeutic qualities which render it the most useful agent in the treatment of this disease.

51 WEST SEVENTEETH STREET.

SPASMODIC CLOSURE OF THE GLOTTIS IN THE ADULT.

A CASE.

By HAMILTON STILLSON, M.D.,
SEATTLE, WASHINGTON.

For the meeting of the American Medical Association of 1897, at Philadelphia, I furnished an article on Spasmodic Closure of the Glottis in the Adult, closing the article with the report of a case. While that case had hypertrophies of the turbinates and septal spurs, the spasm of the glottis did not seem to be caused by the nasal complications, but by tabes dorsalis of rheumatic origin. I have recently had another case of this rare but very disagreeable affection that seemed to have been caused by nasal complications alone; and, though the disease is rare, its importance justifies a complete report of every new case. I therefore submit the following:

On June 26, 1897, E. B. N., a printer, about thirty years of age, apparently in robust health, consulted me, complaining that every night he would find himself suddenly out of bed and in the middle of the floor gasping for breath; attempts at inhalation very noisy, very difficult, and very distressing; could not state the length of time occupied by these spasms—"it seemed several minutes." Stated that he could not get his breath until unconsciousness had almost supervened. These attacks never occurred in the daytime, and never occurred at night during wakefulness.

Under good illumination I elicited an exhibition of the spasm by touching the vocal cords with a probe. The cords fell together like a valve, and efforts at inhalation seemed to suck them closer together. A short view only was obtained of them in this condition, the patient leaning forward over the cuspidor and allowing tenacious saliva to run from the mouth; then, without premonitory coughing, he made violent attempts at inhalation. A short gurgling whoop was heard, and was repeated about every second for about ten seconds. Between the whoops there was a period of exhalation, short and easy. After the first or second attempt at inhalation the patient stood up, paced the floor uneasily, his arms partially extended by his sides, his chin high in the air, and his head thrown back. Profound cyanosis was rap-

idly supervened; the ocular conjunctiva became quickly congested, the eyeballs rolling upward in profuse lachrymation. After about ten seconds the violence of the spasm had passed, though the patient seemed ready to collapse. His distress caused me to administer chloroform, whereupon the inhalations became deeper and less noisy, and were made without so much effort. The inhalations were for several seconds longer, irregular, and wavy. The voice in attempts at phonation also was quavering. The entire attack lasted about thirty seconds. For a moment or two longer the pulse was a little irregular and slightly accelerated. The surface of the body, particularly that of the extremities, was cold to the touch and livid under pressure. The patient did not express any particular discomfort after the attack had passed. There were no evidences of rheumatism, or syphilis, or tuberculosis. The patient did not use alcoholic beverages or tobacco. His general health in other respects was, so far as could be determined, very good. Examination of his nose and throat revealed a large septal spur on the left side of the septum, and deviation toward the left. There was hypertrophy of the lower and middle turbinates, right and left, polypoidal degeneration of the mucous membrane posteriorly, hypertrophy of the lingual tonsil, and hyperemia of the epiglottis and false cords.

Under cocaine anæsthesia I removed the hypertrophy of the left lower turbinate. On June 30th I removed the septal spur with a Bosworth saw. On July 2d he reported the spasms of the larynx less severe, though not less frequent. On July 5th he reported that Saturday night, July 3d, was the first night of good sleep he had had for weeks. There was no laryngeal spasm, and the patient was unduly elated and celebrated the 4th in the most approved style. On the night of the 14th the "nose swelled up again," and he had one of the most severe attacks. I relieved the congested condition with cocaine, and dressed the nose with a bland astringent dressing, which I continued to use until July 20th, when the cut surface had healed. The spasms were now intermittent and not severe. On July 20th I removed the hypertrophy of the right lower turbinate, applying acetate of aluminum as a dressing. The spasms at once ceased, and the cut healed kindly. On July 21st I dismissed the man with both nostrils patent, and no spasm being elicited by touching the mucous membranes with a probe. The patient left for Alaska, attempting to go to the Klondike over the Skagway trail. He worked in "mud and slush" until almost exhausted, and when opportunity offered he lay down and "slept like a baby." Not being able by his utmost exertions to get his equipment across the trail, he returned to Seattle on August 14th for a new supply of horses. He called to see me and report that he had had no symptoms of cough or strangulation. He returned to Skagway with his horses, and made the trip across the trail to Dawson City, where he remained until about the 1st of October, 1898, when he returned, looking quite well, and reporting that the only indication of a relapse of the spasm was the presence of a slight tickling in the throat, which he experienced one night at Dawson City. I consider him permanently cured.

These two cases are in line with Bosworth's belief that attacks of spasmodic closure of the glottis in the adult occurring in the daytime, especially when exhibiting permanent paresis, or paralysis, of one or more of the laryngeal abductor muscles, indicate a central nerve les-

sion; while such attacks occurring at night, and not manifesting permanent impairment of motility in the abductors, may be judged purely "reflex" in character.

THYREOTOMY IN PAPILLOMA OF THE LARYNX IN ADULTS.*

By T. MELVILLE HARDIE, M. D.,
CHICAGO.

It is too short a time since the publication of Heymann's *Handbuch der Laryngologie* to make a historical or a bibliographical review of the operation of thyreotomy either necessary or interesting, and I shall, therefore, limit this paper to a report of two cases of laryngeal papilloma in adults on whom I performed thyreotomy, and to the incidental statement of the indications for the operation:

CASE I.—John B., aged nineteen, was referred to me June 27, 1894, on account of such difficulty in breathing as compelled him to give up work. Inquiry as to family and personal history elicited nothing of particular importance. The patient's lips were bluish and he had a slight stridor, which was increased upon exertion. He had lost in weight, was hoarse, suffered no pain; the mucous membrane of the mouth and pharynx was anæmic. Inspection of the larynx showed the cause of the dyspnoea to be a pale subglottic tumor, involving the anterior commissure and apparently attached to both vocal cords, on their under surfaces, and to the anterior wall of the lower larynx. The extent of the growth inferiorly could not be determined. Iodide of potassium had no effect.

On three occasions it was found possible to remove portions of the growth with a Juaraz laryngeal forceps, but with no effective relief to the breathing. On microscopical examination the fragment was pronounced papilloma. As I hoped to be able to remove much of the growth by endolaryngeal procedures, I did a high tracheotomy under cocaine anaesthesia and inserted a tube, which completely disposed of the dyspnoea. Endolaryngeal operations with snare, curette, forceps, and galvano-cautery were resumed with but slight benefit, and since then consumed a great deal of time, and the patient complained further that no one would employ him on account of his tracheotomy tube, a thyreotomy was decided upon.

A Hahn's tampon cannula was inserted into the original tracheotomy opening, which I enlarged a little, and after a few minutes the thyroid was split and the cartilages held apart with retractors. It was noticed at this instant that the patient was not breathing, the evident cause for the accident being a bend in the chloroform tube, which was caused by the anesthetist, who was stationed at the foot of the table, becoming interested in the operation. I detached the anæsthetic tube from the tracheal cannula; we raised the foot of the table so that the patient was hanging head downward, and performed artificial respiration. On the patient's breathing again I completed the excision of the

growth with scissors, and cauterized its wide place of attachment. Bleeding almost immediately ceased, and I sutured both the thyroid plates and the external incision. The tampon cannula was removed and an ordinary double-tube silver tracheotomy tube was introduced.

The patient's recovery was uninterrupted, but I foolishly made him wear the tracheotomy tube for nearly two months. This was done some years ago, and I did not know any better. I persuaded myself that I was right, because I wished to be prepared for a possible recurrence, and so that I might see the patient for some time subsequent to the operation. I saw the patient a little more than one year after the operation. There had been no return of the growth; his voice was slightly hoarse, but good, and the somewhat prolonged sojourn of the tracheotomy tube had done no visible harm.

CASE II.—Julie K., aged forty-nine, married, appeared at my clinic at the Post-graduate School, March, 1895. On account of her aphonia she required an interpreter, who informed me that the patient, her mother, had been hoarse and had difficulty in breathing for a long time before she lost her voice. In January, 1895, the breathing became so bad that a surgeon performed tracheotomy, which relieved her at once; but the spasmodic cough from which her mother suffered caused them great concern, and they wondered, further, whether nothing could be done to recover the voice. The woman was emaciated and feeble.

Examination of the lungs demonstrated an extensive bronchitis, with little, but very tenacious, secretion. The patient made vigorous attempts at making herself understood, but could only move her lips and make such sounds as I could not describe without the assistance of a phonograph. It was evident that no air was inspired through the mouth or nose. On using the mirror I saw a papilloma, which completely filled the upper larynx, and covered its posterior wall so that only the epiglottis was to be seen. Touching the tumor with a probe excited so severe and so prolonged a spasm of coughing that I had to wait ten minutes before spraying the tumor with a ten-per-cent. solution of cocaine.

This proceeding again excited severe cough, and all attempts at securing even partial anaesthesia by means of the cocaine with spray and absorbent cotton brush were unavailing. The spasms were so severe, both at the first and at succeeding examinations, that every attempt to encircle the growth by means of a wire snare, or to grasp it with forceps, was unsuccessful. Bromides were given, and cocaine was used in as large amount as was considered safe.

I regretfully concluded that I could not remove the growth through the mouth, and therefore, on March 29, 1895, split the larynx under chloroform anaesthesia. I had secured the smallest Hahn cannula to be had in Chicago, but found, when I enlarged the original tracheal opening, that it was impossible to introduce it into the very small trachea which presented. The original tracheotomy had been a very high one, and I therefore made the incision from just above the thyroid notch to the tracheotomy opening. Before opening the larynx I had the head lowered so that the blood could not run down the trachea, and then cut through the cricoid and thyroid cartilages as nearly as possible in the middle line.

* Read before the American Laryngological Association at its twenty-fifth annual congress.

On separating the cartilages it was seen that the papilloma was attached by a comparatively small base near the anterior end of the left vocal cord. It was removed by means of an ordinary nasal snare and its base cauterized with chromic acid. A little iodoform powder was dusted in the larynx and externally. The cartilages were not sutured, but carefully approximated, and the skin was sewed with silk. The tracheotomy tube was left in for three weeks.

The voice was hoarse, but improved gradually. There were very few attacks of the spasmodic coughing after the operation, and the bronchitis was entirely recovered from with great benefit to the patient's general condition. Two or three granulations at the anterior commissure required endolaryngeal cauterization, but there was no recurrence of the papilloma while the patient was under observation, a period of six months only. I omitted the sutures so far as the cartilages were concerned, in order to compare the result with that in my first case.

A CASE OF EXTERNAL CARBOLIC-ACID POISONING TREATED WITH SODIUM-SULPHATE SOLUTION.

RAPID RECOVERY.

By BERNARD WEISS, M.D.,

ASSISTANT ATTENDING PHYSICIAN, BELLEVUE HOSPITAL,
OUT-PATIENT DEPARTMENT.

Mrs. S. B. was advised by her physician to use vaginal douches with carbolic acid for a discharge after a miscarriage. One evening a fountain syringe was filled with warm water and then "just a little" of pure (ninety-five per cent.) carbolic acid was poured in from a bottle. With this mixture the patient syringed herself and allowed the outflowing water to run into a bedpan which had been placed beneath her. As soon as the syringing was begun extreme burning was felt inside; nevertheless, the entire fountain-bag was allowed to empty itself. In a few minutes the patient felt agonizing pain all over her pelvis and began to shriek from suffering. On my arrival the tissues were found to be very tender to the touch and large eschars appeared wherever the solution had touched the skin, whether inside or outside.

The patient was immediately syringed with a warm solution of sodium sulphate, one drachm to the pint, and cloths saturated with the same solution placed on her blistered thighs, etc. Within ten minutes the patient felt somewhat relieved, and in thirty minutes all pain was gone. Saturated cloths were kept on the blistered parts all night, and next day the patient was perfectly well.

The reason the foregoing case is reported is that I have repeatedly heard of physicians who advised in such cases alkaline solutions to neutralize the carbolic acid. As a chemical fact, carbolic acid is not at all, being perfectly neutral in reaction; hence the futility of alkaline solutions. Sodium sulphate, however, forms with carbolic acid sulphocarbolate of sodium, which is soothing in effect and prevents the carbolic acid from doing further damage. This chemical antidote even Withaus fails to mention in his *Chemistry*.

Another reason for reporting this case is to call

forth caution in advising the use of carbolic acid by the laity. Carbolic acid is only very slightly soluble in water, and when poured into water does not dissolve or distribute itself, but falls to the bottom. In turning on the water, for instance, from the fountain syringe, the first thing that escapes is carbolic acid, but very slightly diluted, which may do much injury. In order to obtain a uniform distribution of the carbolic acid the mixture must be continually stirred or shaken.

740 SIXTH STREET.

Therapeutical Notes.

Musk Mixture.—P. Voier (*Journal de médecine de Paris*, November 27th) gives the following formula for a musk mixture, which in European countries is highly regarded as a stimulant and antispasmodic:

R Musk	15 grains;
Alcohol at 95	60 minims;
Syrup	450 "
Distilled water	1,500 "

Triturate the musk with the alcohol, and when it is reduced to an impalpable powder add little by little the water, and then the syrup. According to Foster's *Practical Therapeutics*, it is of value in typhoid diseases when there is subultus tendinum, muttering delirium or hiccough, without collapse or coma; in the adynamic pneumonia of drunkards with cerebral symptoms; in hiccough, laryngismus stridulus, spasmodic cough, pertussis, chorea, tetanus, hysterical convulsions, insomnia due to mental and bodily fatigue, and in threatened paralysis of respiration, as in the advanced stages of cholera infantum or meningitis. From five to fifteen grains may be administered at one dose.

A Local Application for Nasal Ulcers in Ozæna.—Professor Adolfo Fasano (*Archiv. o internazionale di medicina e chirurgia*, November 30th) recommends for topical use in the more or less deep ulcerations that are found in inveterate ozæna the following application:

R Aristol	450 grains;
Collodion	1,200 "
Castor oil	150 "

M. The application should be made daily by means of small cotton holders.

For Nervous Disturbances of Gastric Origin.—The *Clinica medica* (Nov. 1898) gives the following:

R Metallic potassium	11 grains;
Glycine acid, freshly prepared	11 grains;
Powder of opium, finely divided	of a grain
Boiled water	

In each powder. One powder to be given with each meal.

A Mixture for Menorrhagic Dysuria.—According to the *Practitioner* (or *Chirurgeon*), the following is the formula:

R Sodium phosphate	Four grains;
15 grains of water	
Water	
Four grains of opium	

M. S. A. (The *Practitioner* or *Chirurgeon*), Nov. 1898.

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NEW YORK, SATURDAY, JANUARY 7, 1899.

A CHALLENGE TO "CHRISTIAN SCIENCE."

ACCORDING to the *New York Times* for December 28th, a woman was so badly burned at Omaha on December 24th by an explosion of boiling turpentine that she died on the 27th from the effects of her injuries. The family, being Christian Scientists, refused all medical assistance. Of course it is impossible to say whether in this case the patient would have fared any better had she received medical attention, for extensive burns are notoriously very fatal. But the following reflection occurs to us with great force. Medicine is admittedly dependent upon material laws, and is consequently subject to all the limitations imposed by those laws. But "Christian Science" asserts that matter has no real existence, wherefore material laws can have none either; they are figments of the imagination, ghosts so to speak, which will disappear under the power of mind. The injuries, therefore, being unreal, if this theory is true, they can have no magnitude, since there can be neither greater nor less in nought. Consequently the success of treatment ought to be just as certain in what appears to be the severest degree of burn as in what appears to be a trivial one.

In other words, "Christian Science" is what it purports to be or it is not. If it is, then there is *no excuse for failure in any case whatever*; if it is not, then it is pernicious in the highest degree and a public "pest," much as Mrs. Eddy may squirm under the term, since it forbids the use of even such limited therapeutic measures as medicine affords, which measures are beyond dispute in a large number of cases successful. There remains a third, and as we believe the true, hypothesis concerning "Christian Science"—viz., that it is a form of therapeutic "suggestion" or hypnotism, the religious basis serving merely as a means of arousing the initial faith requisite to make "suggestion" operative, which position is, however, vehemently repudiated by the "Christian Scientists" themselves. That position being true, then "Christian Science" would undoubtedly be limited by the ordinary limitations of suggestive therapeutics, which implies that it should be regarded as only one arrow out of the quiver of medicine, and used in such cases only as it is scientifically

applicable to, and by such people only as are possessed of sufficient knowledge of disease to know where and how far the treatment may be trusted, and to what extent it needs supplementing or replacing by other measures. On the first hypothesis every "Christian Science" failure is absolutely criminal and should be dealt with accordingly; on either of the two others the practice of it by unqualified persons is culpable, and its practitioners should be punished, whether successful or unsuccessful, under the medical laws, if they are not properly educated in the healing art as a whole.

Whatever latitude may be allowed to persons acting "out of affection" or from mere common humanity to the best of their knowledge and power, those who set up to be professional philanthropists, and no more mercenary and grasping specimens of that class have ever existed than those of the "Christian Science" cult, and who work for pay can claim no such exemption; and those principles of public protection which apply to all other members of the healing art should be rigidly enforced against them.

Once subject to the medical laws, and having been forced to prove to the satisfaction of the examiners that they possess an adequate knowledge of the structure and functions of the human body and of its varying conditions in health and disease, they would be at liberty to utilize "suggestion" according to their own methods, but with this proviso, that if they showed culpable ignorance or negligence in dealing with any case by employing measures wholly unfitted and inadequate to that particular case, they would be subject, as are all physicians for a flagrant misuse of the therapeutic means at their command, to an action for malpractice.

In another column in the present issue appears a transcript from a letter to the *Sun* by Dr. Charles A. L. Reed, of Cincinnati, in reference to Mrs. Eddy's address to the Christian world. It sweeps aside all sophistries and logomachy and, by directly challenging the truth of her statements as to matters of fact, brings the issue down to close quarters. If Mrs. Eddy has any faith at all in her cult beyond its properties as a big money-making scheme, Dr. Reed affords her in the most candid way an opportunity of demonstrating it under conditions which, while satisfactory as a test to her opponents, can leave nothing to be desired by any fair-minded disputant on the side whose position is here challenged. If Mrs. Eddy fails to take up this eminently fair-minded challenge, affording her that opportunity of demonstrating her position which she and her adherents profess so earnestly to desire, then she will stand convicted as the charlatan we at present believe her to be. If, on the other hand, she can practically

substantiate her claims to effect more than can be effected by ordinary lay hypnotists who base their position upon suggestion pure and simple, without any appeal to a religious platform, and can clearly prove that cases of organic disease with actual structural alteration can be cured by her methods, she will do more to establish her claims among all honest seekers after truth, whether medical or lay, than any amount of verbose and seemingly puerile quasi-metaphysics can possibly accomplish.

MR. RIDER HAGGARD'S *DOCTOR THERNE*.*

ONE need not be a partisan of compulsory vaccination to appreciate the tremendous harm which organized opposition to vaccination may bring about. How it may do this is admirably and dramatically set forth by Mr. Rider Haggard in his story entitled *Doctor Therne*. The story is told in the first person, and this has led Mr. Haggard into one or two slips in making Dr. Therne relate incidents that he could not have known about, at least in the particularity with which he tells them. That is the only fault we have to find with the book. In particular, we have nothing but praise for Mr. Haggard's accounts of medical matters, the well-known stumbling-block of the lay writer.

Dr. Therne, an uncommonly clever young physician, incurs the enmity of Sir John Bell, the leading practitioner of an English city in which he, Therne, has recently settled in practice. This he does by proving that Sir John has, by reason of negligence, not only mistaken a case of venous thrombosis for one of rheumatism, but actually caused the patient's death by insisting on a vigorous course of rubbing, whereby a portion of the clot is detached and carried into the pulmonary circulation. The open breach between Sir John and Therne seems to have been healed at last, and Sir John offers to attend Mrs. Therne in her approaching confinement. His offer is accepted, but the lady dies of puerperal fever. During her illness, and before he yet knows the nature or the gravity of it, Therne attends a titled lady, and she, too, dies of puerperal fever. Her husband brings a criminal prosecution for manslaughter against Therne, and Sir John Bell gives false testimony that is very damaging to the accused. The jury brings in a verdict amounting to "not proven," and Therne finds himself utterly discredited, destitute of resources, and threatened with a civil suit based on the same allegations as the criminal process had been, but this is discontinued.

In the preliminaries of the criminal trial a rich old crank goes bail for Therne. The old fellow is a rabid antivaccinationist, and he employs Therne to search out and report upon cases of the real or apparent injurious effects of vaccination. At last he induces him to run for parliament on the Liberal ticket in a borough where the Liberals' sole chance of success lies in a vigorous campaign on the antivaccination basis. Before that, Therne had done nothing dishonorable; now he enters upon a course of duplicity which ultimately ruins him. In reality, he is a thorough believer in vaccination, but, to show that his assumed opposition to compulsion is sincere and based on his aversion to vaccination, he shows the bare arms of his little daughter, four years old, which are destitute of vaccination marks, although the truth is that he had always meant to have her vaccinated, but had put off the little operation on account of the delicate state of her health.

Therne is elected to parliament and keeps his seat for twenty years. Finally an epidemic of small-pox befalls the borough, and his daughter, brought up in an atmosphere of active opposition to vaccination, has never been vaccinated. A young physician who has fallen in love with her finds that she has been exposed to small-pox, and begs her to let him vaccinate her, but, loyal to her father and his assumed convictions, she will not submit. In due time she comes down with the disease and, just as she is compelled to take to her death-bed, she comes upon her father in the dead of night secretly vaccinating himself. Shortly before her death she informs the young doctor of what she has witnessed.

The climax occurs that night at a political meeting. It would hardly be fair to the book for us to mention the dramatic scene with which it closes. We hope it will be read far and wide, especially by the honest people who have suffered themselves to be led into the antivaccination delusion.

MINOR PARAGRAPHS.

MORE ABOUT "THE ORION": A CORRECTION CORRECTED.

IN our issue for December 24th we said in a minor paragraph that we should like to know to what language the word "orion" belonged. We did not anticipate that our remark would be taken as a score as a request for information, but rather that it might cause those who were rusty in their Latin to refresh their memory by reference to a dictionary. One reply, however, written to us, *Galaxy*, Dec. 28, 1898, *Wash. M. T. Herald* for December 24th, proposed, very well and true to know to what language the word "orion" belongs. Answer: Latin. But the precise fate of the word is governed by the proposition that "Nomen est Verbum."

* *Doctor Therne*. By H. Rider Haggard. New York: London, and Bombay: Longmans, Green, & Co., 1898.

ori; accus., *orem*; abl., *ore*." We beg respectfully to inform our correspondent that *orem* is not the accusative case singular of *os*. *Os* is neuter, and its accusative case is, therefore, as in all Latin nouns, the same as its nominative. If our correspondent doubts our word we refer him to any Latin dictionary in proof of the first statement, and to any Latin grammar in proof of the second. There is a great deal too much bastard Latinity current in medical writing, and this does great harm to the claims of the medical faculty to a place among the "learned professions." Better use correct English than incorrect Latin.

THE LAW IN ITS RELATIONS TO MEDICAL MEN.

IN this issue of the *Journal* we begin the publication of a series of articles, by Mr. Taylor, which can not fail to prove instructive on many a point in which the law affects physicians. They are not on the subject of medical jurisprudence, it will be seen, but on the rights, duties, privileges, exemptions, and accountability of medical men under the law—topics concerning which the practitioner every now and then finds himself urgently in need of information. Mr. Taylor's articles will treat of them with the definite purpose in view of giving just that sort of information in language free from legal technicalities or with only such technical law expressions as are explained in the articles themselves.

AMPUTATION OF THE THIGH WITHOUT HÆMOSTASIS.

M. DESGUIN (*Gazette hebdomadaire de médecine et de chirurgie*, December 15th) reported recently to the Belgian Society of Surgery the case of a man twenty-four years of age in whom he amputated at the thigh after having applied Eschsch's band. At the end of the operation he did not tie a single vessel. He applied a slightly compressing dressing and placed the stump on an inclined plane. A cure was effected without any accidents, and union by first intention took place. M. Desguin cited this case to prove that it is possible in a great number of cases to sever even important vessels without any considerable hæmorrhage resulting. It is not, however, stated why so extraordinary a proceeding was considered desirable, the danger of which is recognized by the author himself when he remarks that the procedure is not an example which can be recommended for imitation in all cases.

THIOCOL.

DR. SCHWARTZ (*Gazzetta medica lombarda*, 1898, p. 275; *Gazette hebdomadaire de médecine et de chirurgie*, December 11th) proposes a new combination for tuberculosis, which he names thiocol. It is a sulphoguaiacolate of potassium and has the following formula:



100 c. c. of the following ingredients: 1. Iodurum mercurii, 2. Solubility in water, 3. Absence of any irritant effect upon mucous membranes, 4. Great facility of absorption. The preparation is said to be easily tolerated, and may be administered without inconvenience to the extent of from a hundred and fifty to two hundred and twenty-five grains daily. Under its influence the appetite is said to return, an amelioration of strength ensues, and the

patient gains flesh. The cough is diminished rapidly in intensity and frequency, the expectoration becomes less in quantity and less purulent, the night sweats disappear, and the general condition improves. Physically the pulmonary lesions appear to undergo arrest.

A NEW INTERNATIONAL PSYCHOLOGICAL JOURNAL.

WE have received the first number of *L'Intermédiaire des neurologistes et des aliénistes*, which is described as an *organe international trilingue de neurologie, psychiatrie, psycho-physiologie*. It is under the direction of Dr. Paul Sollier and is announced to be published on the 10th of each month. The first number, which now lies before us, is that of November 10, 1898. The principal feature consists in the reproduction of each article in French, German, and English. This number contains, first, the programme of the journal; secondly, a section of questions and replies; and finally, a summary of neurological and psychological journals published in the French, English, German, and Italian languages. In regard to the English version, while it is not in any sense obscure, there are a large number of translated idiotisms which mar its smoothness to the English reader. To give an instance, we may mention the constant use of the infinitive in place of the present participle in dependent sentences—e. g., "hinder many a practising physician to publish, etc.," instead of "from publishing." There must surely be in Paris some English physician who could be induced to collaborate by removing these idiotisms from the English translation, and thus render the excellent idea more perfect in execution. We wish every success to the new venture.

THE INJECTION OF ANTITETANUS SERUM INTO THE SUBARACHNOID SPACE.

THE interest felt in the treatment of grave cases of tetanus by the direct application of the antitoxine to the central nervous system is further exemplified in a communication recently made to one of the French medical societies by M. Étienne Martin, a hospital interne (*Lyon médical*, November 20th). A lad eighteen years old entered the hospital in Jabonlay's service, a week after having wounded his foot by stepping on a nail. On the day before his admission he had experienced difficulty in opening his jaws and in chewing. At the time of his admission there were generalized tetanic contractions, and he could scarcely speak. The cicatrix left by the wound was excised at once. Then lumbar puncture was practised with a large trocar. About ten cubic centimetres of absolutely clear liquid escaped, and a like amount of antitetanus serum was injected. The usual treatment with chloral and morphine was begun at the same time. That afternoon the lad died without having shown any amelioration. The reporter stated, however, that, notwithstanding the failure of the lumbar-puncture treatment in this case and in two others, one of his own and one of Brissaud's, M. Jabonlay would resort to it again, but immediately after the infection.

AN ATTEMPT TO PREVENT PHOSPHORUS POISONING AMONG WORKERS IN MATCH FACTORIES.

AN important advance in the manufacture of matches by two French engineers, M. Sève and M. Cahen (*Revue d'hygiène*, 1898; *Lyon médical*, November 20th). The matches, which have been on sale for several months,

are said to be perfectly satisfactory. The sesquisulphide of phosphorus is used in making them, a compound described as intermediate in properties between ordinary white phosphorus and red phosphorus. It gives off no fumes at usual temperatures and does not oxidize in the air; consequently the danger to the makers of these matches is reduced to the minimum that may result from direct absorption.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending December 31, 1898:

DISEASES.	Week ending Dec. 24.		Week ending Dec. 31.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	20	12	18	9
Scarlet fever.....	141	12	141	11
Cerebro-spinal meningitis.....	0	6	0	11
Measles.....	123	6	142	9
Diphtheria.....	151	32	155	25
Croup.....	23	8	16	11
Tuberculosis.....	202	165	126	173
Small pox.....	1	0	3	0
Chicken-pox.....	0	0	11	0

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine Hospital Service during the week ending December 30, 1898:

Small-pox—United States.

Pueblo, Col.....	Dec. 10-17.....	4 cases, 1 death.
Hillsboro, Kan.....	Dec. 24.....	9 "
(Reported as imported from Russia.)		
Newton, Kan.....	Dec. 21.....	2 cases, 1 death.
Seneca, Kan.....	Dec. 21.....	1 case.
(A member of the Seventh California Volunteers.)		
Louisville, Ky.....	Dec. 21.....	1 case.
(Origin not known.)		
New York, N. Y.....	Dec. 21.....	1 "
Guthrie, Oklahoma.....	Dec. 17.....	4 cases.
(Total to date, 5 cases.)		
Bedford, Pa.....	Dec. 20.....	9 "
Enid, Fulton County, Pa.....	Dec. 20.....	Reported present.
Robertdale, Huntingdon County, Pa.....	Dec. 20.....	Reported present.
Memphis, Tenn.....	Dec. 20.....	1 case.
Wilmington, N. C.....	Dec. 21.....	1 "
(Workmen employed on repairs at Marine Hospital station; origin of disease unknown.)		
Norfolk, Va.....	Dec. 21.....	7 cases.
(Unofficially reported that 5 cases were sent to County Pest House from the village of Berkeley.)		

Small pox—Foreign.

Antwerp, Belgium.....	Dec. 4-12.....	8 cases, 4 deaths.
Haifa, Brazil.....	Nov. 19-Dec. 3.....	43 " 3 "
Rio de Janeiro, Brazil.....	Nov. 4-18.....	20 " 11 "
Guayaquil, Ecuador.....	Nov. 4-12.....	9 " 1 death.
Bombay, India.....	Nov. 22-29.....	1 "
Rome, Italy.....	Nov. 5-12.....	1 "
Moscow, Russia.....	Nov. 25-Dec. 3.....	13 " 1 death.

Yellow Fever—Foreign.

Rio de Janeiro, Brazil.....	Nov. 4-18.....	8 cases, 5 deaths.
Vera Cruz, Mexico.....	Dec. 8-16.....	1 "

Plague.

Bombay, India.....	Nov. 15-21.....	2 deaths.
Bombay, India.....	Nov. 22-29.....	4 "
Madras, India.....	Nov. 19-25.....	1 death.

Cholera—Foreign.

Calcutta, India.....	Nov. 5-12.....	2 deaths.
Madras, India.....	Nov. 19-25.....	5 "

Japan.—During the period from October 21st to November 17th there were 9,746 cases of dysentery and 2,856 deaths. The entire empire now seems to be saturated with the poison of this disease, and its annual recurrence may be fairly anticipated.

The Medical Society of the County of Broome, N. Y.

—At the last quarterly meeting, held in Binghamton, on Tuesday, January 3d, the following papers were to be read: The X Ray. What can we do with it? by Dr. D. E. Cone; Hygiene, by Dr. I. A. Hix.

The Buffalo Academy of Medicine.

—At the last regular meeting of the Section in Surgery, on Tuesday evening, January 3d, the following papers were to be read: A Study of Protargol in Acute Gonorrhea, by Dr. George K. Swinburne; Burns, Scalds, and Frostbites, by Dr. A. E. Diehl.

What is Nature?—Dr. A. Jacobi (*Philadelphia Medical Journal*, December 24th), in an article on Some Preventives, makes the following sound remarks:

"Nature does not kill and does not heal. If there were consciousness in Nature, she would feel indifferent about what she is—viz., mere evolution. Nature is sunshine that grows harvests and sunstrokes; she makes moonshine for lovers and for burglars, and rain to feed men and to drown them, and the sun warms the unjust and the just. Nature is a Mauser bullet; stand in its way, you are hit; dodge, and you are saved—it makes no difference to Nature. In Nature a diphtheria bacillus has its democratic rights and duties like George Washington, and it killed him; she has no predilections, no reasoning; she is cause and effect. She can be led and doctored. The engineer heals her deformities in the interest of commerce; insurance companies correct her failures or calamities; indeed, the logical mind of man and the logical necessities of Nature are engaged in a constant strife for superiority. In matters of health and disease of *Homo sapiens* the doctor utilizes or combats the doings of Nature. By curing he cures. Curing has long ago lost its literal meaning. It is healing."

A New Method of inducing Premature Labor.—Spinnelli (*Gazzetta medica lombarda*, December 12th) described at the Congress of Obstetrics and Gynecology, in Turin, a new method of inducing premature labor, which consisted of introducing the index finger into the cervical canal, previously dilated in primiparae, and then passing beyond the internal orifice. The inferior portion of the membrane is then gently torn with the hooked finger, and by the guidance of the finger a strip of gauze impregnated with glycerate of ichthyl is inserted, which should be placed between the ruptured membrane and the lower segment of the uterus. This manœuvre can be executed by the drawing down of the uterus by means of a forceps applied to the lower part of the cervix. The vaginal canal is then closed with a sterilized gauze. Labor usually occurs in about four hours. The author described four cases, three of which resulted

Verdict of Manslaughter against a Faith Curist Upheld.—The Supreme Court of the State of New York, in the case of *The People vs. John J. Smith*, who was charged with the murder of a woman named Mrs. Justice, held that the verdict of manslaughter was proper.

in allowing her to die of pneumonia without asking medical advice. The case came up last week before the Court for Crown Cases Reserved, but the decision was unanimously upheld.

The Proper Way to Teach.—The *Philadelphia Medical Journal* for December 24th says:

"We have seen much of several schools and we are glad to say that in a few the secret of teaching has been learned. We recently accompanied one of these modern teachers as he went through his wards with his class. He gave no didactic lectures. He held recitations on the diseases that were not likely to be seen in the wards. Two hours daily he was in the hospital with his students and talked to them and showed them how to examine and what to look for, and they examined for themselves and took daily notes of the cases and at the post-mortem table saw what really was. He has learned the great lesson that the function of a teacher is to teach method, teach how to learn, and to give opportunity to learn, and not merely from the professorial chair say with the infallibility of a lay pope, This is so because I say it, and forget it at your peril, and never mind why it is so, and do not try to use your own eyes and ears and hands to find if verily it is true, but accept my authority. The secret of instruction is to teach methods, not results; to teach by demonstration, not by dictum."

Change of Address.—Dr. B. W. Brush, to Woodside, Long Island.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending December 29, 1898:*

WHEELER, W. A., Surgeon. To proceed to Cairo, Ill., and assume command of service. December 28, 1898.

KALLOCH, P. C., Surgeon. Upon being relieved by WHEELER, W. A., Surgeon, to proceed to Gulf Quarantine Station and assume command. December 28, 1898.

McINTOSH, W. P., Passed Assistant Surgeon. To report to the Director of the Hygienic Laboratory for a course of instruction. December 27, 1898.

SMITH, A. C., Passed Assistant Surgeon. Upon being relieved by KALLOCH, P. C., Surgeon, to proceed to Norfolk, Va., and assume command of service at that port. December 27, 1898.

EAGLE, J. M., Passed Assistant Surgeon. To report to Director of Hygienic Laboratory for a course of instruction. December 27, 1898.

NYBERG, E. A., Passed Assistant Surgeon. Granted four days leave. December 24, 1898.

STEWART, W. J., S., Passed Assistant Surgeon. To rejoin station, Washington, D. C., immediately. December 29, 1898.

HASTING, H. H., Assistant Surgeon. Upon being relieved, to report to Director of Hygienic Laboratory for a course of instruction. December 27, 1898.

RUSSELL, H. C., Assistant Surgeon. Upon being relieved by BOHANNON, D. E., Assistant Surgeon, to proceed to Louisville, Ky., for duty and assignment to quarters. December 27, 1898.

BILLINGS, W. C., Assistant Surgeon. To report to WHITE, J. H., Surgeon, Immigration Depot, New York, N. Y., for duty. December 27, 1898.

KERR, J. W., Assistant Surgeon. To report to medical officer in command at San Francisco, Cal., for duty and assignment to quarters. December 27, 1898.

ROBINSON, D. E., Assistant Surgeon. To report to medical officer in command at Chicago, Ill., for duty and assignment to quarters. December 27, 1898.

CORPUS, G. M., Assistant Surgeon. To assume command of Egmont Key Detention Camp. December 27, 1898.

STEVENSON, J. W., Acting Assistant Surgeon. To assume temporary charge of service at Cincinnati, Ohio. December 28, 1898.

Appointments.

To be assistant surgeons:

BILLINGS, WILLIAM CHESTER, of Massachusetts. December 23, 1898.

KERR, JOHN WALTER, of Ohio. December 23, 1898.

ROBINSON, DANA ELIHU, of Ohio. December 23, 1898.

CORPUS, GUSTAVE MAXIMILIAN, of Georgia. December 23, 1898.

Births, Marriages, and Deaths.

Married.

BOVAIRD—LASKER.—In Montreal, on Tuesday, December 27th, Dr. David Bovaird, Jr., and Miss Louise Lasker.

BROUGHTON—PINGREE.—In Jamaica Plain, Massachusetts, on Saturday, December 24th, Dr. Arthur N. Broughton and Miss Lilian DeW. Pingree.

BRUSH—FOSTER.—In New York, on Saturday, December 24th, Dr. B. W. Brush and Miss Mabel Hoyt Foster.

DRAPER—HOFFMAN.—In New York, on Wednesday, December 28th, Dr. William Kinnicutt Draper and Miss Helen Hoffman.

FRAMPTON—LUCAS.—In Wando, South Carolina, on Wednesday, December 14th, Dr. James Frampton, of Mount Pleasant, South Carolina, and Miss Elizabeth Buist Lucas.

LOTTERHOS—SAMPLE.—In Summit, Mississippi, on Tuesday, December 20th, Hon. F. H. Lotterhos and Miss Helen Sample, daughter of Dr. J. R. Sample.

MURPHY—MARCHEL.—In Mobile, Alabama, on Thursday, December 22d, Mr. Samuel S. Murphy, Jr., and Miss Marie Marchel, daughter of Dr. Edwin L. Marchel.

PRICE—DENNY.—In Boston, on Sunday, December 25th, Dr. Walter H. Price and Miss Nora L. Denny.

PRICE—WILLIAMS.—In Booneville, Mississippi, on Thursday, December 22d, Dr. John Wesley Price and Miss Hettie Williams.

SILCOCKS—SMITH.—In Watervliet, N. Y., on Wednesday, December 10th, Dr. William E. Silcocks and Miss Henrietta Smith.

WHITE—SCOTT.—In Chelsea, Massachusetts, on Wednesday, December 21st, Dr. E. L. White and Miss E. E. Scott.

Died.

BROWN.—In Noroton Heights, Connecticut, on Tuesday, January 2d, Dr. William G. Brownson, in the sixty-ninth year of his age.

EDDY.—In Greenville, Rhode Island, on Friday, December 16th, Mrs. Emily Tillinghast Eddy, wife of Dr. Elmer B. Eddy.

GUILLON.—In New York, on Sunday, January 1st, Dr. Charles F. Guillon, United States Navy, aged eighty-six years.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

I.

INTRODUCTION

Origin and Development of Our Laws.—Our system of laws, like our language, was brought with us from the mother country, where it had slowly developed during the centuries that saw the crude, barbaric Briton become the civilized and enlightened Englishman.

Like the Englishman of modern times, our law represents not alone development but also the reception and assimilation of foreign material from widely separated sources. When the Britons gave way to the more powerful Saxons the laws of the Druids commingled with and became a part of the Saxon laws and customs; the subsequent arrival of the Danes brought additional elements; afterward the invasion of the Romans, and finally the conquest of the Normans, brought much of the civil law of continental Europe and many customs foreign to those of our northern ancestors; among these was the feudal system upon which is based our present law of real estate. Not only was the law greatly changed in substance by this latest arrival, but in outward form as well, Norman-French being the language in which all public proceedings were recorded and in which the records of the courts were kept from the time of William I to that of Henry III. The Latin language was substituted by Henry III, and from that time the Law Latin was used until the fourth year of George II, except during the time of Cromwell, that sturdy character evidently deeming good, terse English a better medium for expressing the law of a great nation. It is undoubtedly by reason of this slow development and liberal admixture of elements from such widely separated sources that both our language and our system of laws have acquired their wonderful degree of flexibility that is shown in the readiness with which they meet the requirements of our constantly changing and developing conditions.

General Divisions of the Law.—Our laws are divided into two kinds—the common law, or *lex non scripta*, and the statute law, or *lex scripta*.

Common Law Described.—The Latin names of these two general divisions of the law are in a measure historically descriptive, the *lex non scripta*, or common law, being those general and particular customs which have existed time out of mind, or, according to the ancient legal expression, "time whereof the memory of man runneth not to the contrary," undoubtedly not their origin at a time when writing was unknown in western Europe, some of them being said to be derived from the Gallic Druids. Blackstone, who wrote at about the middle of the eighteenth century, describing the common law, said: "This is that law by which the Romans, and the

terminations in the king's ordinary courts of justice are guided and directed. This, for the most part, settles the course in which lands descend by inheritance; the manner and form of acquiring and transferring property; the solemnities and obligations of contracts; the rules of expounding wills, deeds, and acts of parliament: the respective remedies of civil injuries; the several species of temporal offenses; and the manner and degree of punishment: and an infinite number of minute particulars which diffuse themselves as extensively as the ordinary distribution of common justice requires." * It was to this branch of the law that Lord Coke referred when he said: "Reason is the soul of the law; and when the reason of any particular law ceases, so does the law itself." † Such a system of law, it will be observed, can not be reduced to writing in the form of a code without having its entire nature changed. The universal application of the principles and customs of which it consists would be destroyed, and the system would become crystallized into a set of fixed rules incapable of organic growth and development. There is, however, some method of recording necessary to secure stability and certainty to this branch of the law, and this is accomplished by preserving the records of the courts of highest jurisdiction, which show the history of each case determined and illustrate the application of the principles of law governing it. These records are kept as precedents to guide the courts in the future application of law to similar facts coming before them for adjudication.

Common Law of the United States.—The common law of England was not found to be entirely suited to the altered conditions on this side of the Atlantic, and was therefore only adopted so far as it was applicable to our situation. The term common law as used in the United States may be generally said to include all of the law of England existing at the time of the settlement of the colonies which was found applicable to our conditions.

In contemplating the great age of our common law and the identity of its development with that of our parent nation, one can not help regarding it with a feeling of veneration and sympathizing with the Mississippi lawyer who, upon seeing the common-law rights of dower † and coverture[§] wiped out by the legislature of his State, exclaimed: "Venerable relics of antiquity, you have come down to us from a former generation. You have survived the wreck of empires and change of dynasties. Born way back in the womb of Time, whereof the memory of man runneth not to the contrary, you have outlived the War of the Roses, crossed safely through the Protectorate, crossed the ocean, survived the great American Revolution, and rode out the storm of the late great war. What or attendants were absent from the birth of Adam, you two at least were always there; and when the first Adam gave up mortally murmured, 'With all my worldly goods I do leave you,' you, as priest and priestess, so held your ground. The shades you've followed the twin blood of humanity, and wherever

* $\lim_{n \rightarrow \infty} \frac{1}{n} \sum_{i=1}^n f(x_i) = \int_a^b f(x) dx$.

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either fell one of you administered the balm of consolation to the survivor. If pure religion and undefiled be to visit the fatherless and the widow in their affliction, thy mission has been akin to it. Venerable priest and priestess of the common law, farewell! You have been pleasant in your lives, and in your death have not been divided."²²

Statute Law.—The statute law, or *lex scripta*, consists in England of all of the enactments of parliament, or, as an English writer of the eighteenth century, more in the courtly language of the times, said, it consists of those "statutes, acts, and edicts made by the king's majesty, by and with the advice and consent of the lords spiritual and temporal, and commons in parliament assembled." In the United States the statute law includes all positive enactments of the various legislative bodies.

Whenever a question arises as to the application of a statute to a given condition not coming clearly within the purport of its meaning, the aid of the common law is invoked by the courts in interpreting and construing the act; it therefore will be seen that the common law forms the fundamental groundwork of our entire system.

Reason the Foundation of Law.—Reason being the soul of our law, as very aptly stated by Lord Coke, it necessarily follows that a clear comprehension of the law is based upon a knowledge of the reason underlying the law, and that one can not really know the law without first knowing the reason therefor.

In writing these articles the author will endeavor to keep this fundamental truth in mind, and will, whenever possible, first develop the general principle, giving the reason supporting the same, and then illustrate its application by particular cases. Whenever that course seems impracticable, he will endeavor to show the principle governing in the particular case and the reason for its application.

Book Notices.

Manual of Diseases of Children. By JOHN MADISON TAYLOR, A. M., M. D., Professor of Diseases of Children, Philadelphia Polyclinic, etc., and WILLIAM H. WELLS, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic, etc. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1898. Pp. xii-17 to 713. [Price, \$1.]

According to the statement of the authors in the preface, the book is not a treatise on the diseases of children, and they "do not attempt to offer much that is original or novel, and only obtrude their individual views when commenting upon the opinions of the great masters in the field of pediatric medicine."

The book is divided into twenty chapters. It is compact in its form, of convenient size, and well printed, and contains twenty-five illustrations, the majority of which are of great and show clinical types of disease. Examination of the book confirms the statement made in the preface that the authors have little or nothing

new to say on the subject of pediatrics. It appears to be largely an abstract or condensation made up from three of our latest books, those by Starr, Rotch, and Holt. These are all extensively quoted, the quotations sometimes covering pages.

The aim to give to medical students a condensed manual which represents fairly well pediatric opinion in this country has been, we think, achieved. Practitioners of medicine, however, will find it, we believe, too brief to be very satisfactory. As an illustration of the way treatment is discussed in many diseases, the following may be cited, referring to incontinence of urine, page 281: "In diseases attended by congestions, the use of ergot has been recommended. Cold douches to the perineum and faradism have been of some use. The passage of the cold sound in boys is recommended. Urethral electrization is often efficacious. Increasing doses of atropine or hyoscyne hydrobromate is the most reliable measure."

There are a good many minor defects indicative of carelessness in preparation; for example, there are two articles on retropharyngeal abscess, one on page 163 and one on page 400. On page 163 the disease is described as a lymphadenitis; on page 400, it is said to be an inflammation situated beneath the mucous membrane. The book abounds in coined words.

On the whole, we think the book will find a useful place with students in medical schools, but it can hardly supplant any of the leading treatises above referred to, for those who desire to get their knowledge at first hand.

An American Text-book of the Diseases of Children.

Including Special Chapters on Essential Surgical Subjects; Orthopædics; Diseases of the Eye, Ear, Nose, and Throat; Diseases of the Skin; and on the Diet, Hygiene, and General Management of Children. By American Teachers. Edited by LOUIS STARR, M. D., Consulting Pediatricist to the Maternity Hospital, Philadelphia, etc.; assisted by THOMPSON S. WESTCOTT, M. D., Instructor in Diseases of Children, University of Pennsylvania, etc. Second Edition, revised. Philadelphia: W. B. Saunders, 1898. Pp. xvi-1244. [Price, \$7.]

In its second edition this work is essentially a reproduction of the first, which appeared in 1894. There are some slight changes in the arrangement and new articles have been introduced upon modified milk and percentage milk mixtures, lithæmia, orthopædies, tuberculous meningitis, hydrocephalus, and typhoid fever.

The article on modified milk, by Dr. Westcott, is clear, concise, and in every way commendable; that on lithæmia, by Dr. B. K. Rachford, is an excellent one. The section on orthopædies comprises thirty pages and is from the pen of Dr. James E. Moore. It is necessarily very brief, too brief in fact to add much to the value of the book for the general practitioner. It is to be regretted that a more thorough revision of the article on diphtheria was not made. Of the eight pages devoted to treatment, only one is given to antitoxine, and so much in the way of other treatment is advised that a wrong impression is conveyed to the reader of the real place that antitoxine holds, even in the mind of the author; for, according to his own experience, which he cites, he is certainly a strong believer in its efficacy. It seems a serious omission, also, not to have incorporated in the article on cerebro spinal meningitis the recent discoveries in its etiology. This chapter appears unchanged.

* *Supplies of an of the*, November, 1890, from *Annotated Code of Mass.* 1893.

The new matter introduced has increased the size of the book by about fifty pages. It would, in our opinion, have been better had the revision included an abbreviation of some of the unnecessarily long articles, instead of making the volume, already very large, still more unwieldy in its size.

Essentials of Materia Medica, Therapeutics, and Prescription Writing, arranged in the Form of Questions and Answers, prepared especially for Students of Medicine. By HENRY MORRIS, M. D., Fellow of the College of Physicians of Philadelphia, etc. Fifth Edition, revised and enlarged. (Saunders's Question Compends, No. 7.) Philadelphia: W. B. Saunders, 1898. Pp. 16-288. [Price, \$1.]

THAT this work has passed through five editions is sufficient proof of its popularity. The new edition has been carefully revised, some obsolete matter has been omitted, and some additions have been made, particularly relating to the newer drugs. The doses are expressed in the metric as well as in the apothecaries' system, and this will add to the usefulness of the book.

While we believe that the author is right in making some classification of drugs as an aid to the student's memory, we must confess to a slight mental shock at finding antipyrine mentioned among the mydriatics and cod-liver oil among the aphrodisiacs. It should be said, however, that they receive only a passing notice in these connections. The new edition will doubtless retain the popular favor of its predecessors.

A Clinical Manual of Skin Diseases. With Special Reference to Diagnosis and Treatment. For the Use of Students and General Practitioners. By W. A. HARDWAY, M. D., A. M., Professor of Diseases of the Skin and Syphilis in the Missouri Medical College, St. Louis, etc. Second Edition, revised and enlarged. With Forty-two Engravings and Two Plates. Philadelphia and New York: Lea Brothers & Co., 1898. Pp. xii-17 to 557.

THE second edition of Dr. Hardway's book can not but receive the praise which is its due, inasmuch as it presents in a concise and clear manner the clinical and symptomatic features characterizing cutaneous diseases. It does not, fortunately, confine its description of the etiology, symptomatology, pathology, and treatment of these affections to the limits of the compendiums which appear so frequently, and which impart only the narrowest and barest knowledge of the subject to those who depend upon them, but it enters practically and thoroughly enough into each division mentioned to enable one to obtain not only a fair understanding, but also a desire to know more about them. In Part I the symptomatology, diagnosis, treatment, etc., are dealt with in general, while Part II contains the different classes into which the author has placed the various forms of skin diseases. In his classification Hardway has followed Hebra as modified by Crocker, and his Class I contains inflammations. Under this heading are included, among others, the various forms of erythema, eczema, herpes, pemphigus, eczema, urticaria, lichen, gangrene, dermatitis of various origin, etc. Class II is represented by hemorrhage, and then come successively hypertrophies, atrophies, new growths, neuroses, diseases of the appendages—glands, hair, nails—and lastly parasitic diseases. In these eight classes he includes all the

common diseases of the skin and a great many of the unusual or rarer forms, so that there can be found in the book a guide to almost any of the diseases of the skin.

As regards the descriptive part of the *Manual*, it can only be said that it is clear, comprehensive, and distinct, and the portions devoted to treatment are forcible and replete with valuable suggestions. It can certainly be frankly recommended to those who desire to know something about the affections occurring upon the skin, and will prove satisfactory to the busy practitioner, especially, who thinks not so much of the science of dermatology as he does of the diagnosis of his patient's disease and the way to get it well.

A Manual of Venereal Diseases. By JAMES R. HAYDEN, M. D., Chief of Clinic and Instructor in Venereal and Genito-urinary Diseases at the College of Physicians and Surgeons, New York, etc. With Fifty-four Illustrations. Philadelphia: Lea Brothers and Company, 1898. Pp. ix-17 to 304. [Price, \$1.50.]

THIS edition, like its predecessor, gives a summary of the pathology, symptoms, and treatment of the three venereal diseases, gonorrhea, chancroid, and syphilis, with their complications and sequelae. It shows evidence of a thorough revision, and the addition of a chapter on the care and use of medical instruments, containing a few brief but exceedingly pertinent rules, will make the work even more useful than it was before.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by JEROME DEXANDER, M. D. (Univ. of Pa.), Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc.; J. MITCHELL BRUCE, M. D., F. R. C. P., London, Physician to and Lecturer on the Principles and Practice of Medicine in the Charing Cross Hospital; and DAVID W. FENLAY, M. D., F. R. C. P., Aberdeen, Professor of Practice of Medicine in the University of Aberdeen, etc. Volume III. Eighth Series. Philadelphia: J. B. Lippincott Company, 1898. Pp. ix-355.

THIS volume opens with an article by Braden on the therapeutic use of alcohol, in which he urges the use of the undiluted drug, instead of wines, etc., and gives some account of the composition of the so-called fluid malt preparations. The lectures upon the treatment of tuberculosis, by Professor Gröber, to which we have alluded before, are continued. A lecture on some forms of abdominal pain, by Lander Brunton, and one on mitral stenosis, by Graham Steel, together with the consideration of some of the commoner medical children's diseases, by Trendelenburg, form the most important factors in the volume. In medicine the chapter that attracts most attention is that upon the treatment of cancer, by Trendelenburg, and the operation, by Moore, and the treatment of the constitutional causes of heart and B. disease, by Trendelenburg.

lecture on the two forms of chronic non-suppurative disease of the middle ear, hypertrophic catarrhal and sclerotic, or adhesive, inflammation.

Miscellany.

Mucomembranous Enteritis during Pregnancy.—M. Poizat (*Gazette hebdomadaire de médecine et de chirurgie*, November 24th) reported to the Congress of Gynaecology, Obstetrics, and Padiatry at Marseilles a case of mucomembranous enteritis commencing at about seven months and a half of the pregnancy, disappearing after delivery, and reappearing in a milder form during a second pregnancy. The author insists that there were no pathological antecedents, no neuropathy, no habitual constipation, no marked dyspeptic troubles. He does not consider the nature of this form of enteritis as different from that occurring in daily practice, the overproduction of intestinal fermentation being the principal exciting factor. This toxæmia may be the consequence of the constipation, which is common in pregnant women. The enteritis, though not rare in pregnancy, is often overlooked in the phenomena to which it has given rise. The microbic element ever present in mucous membranes is alone able to explain the infection. M. Vinay thinks that the condition is rare and can often be traced to intestinal paresis consequent on impregnation; but self-intoxication and a peculiar nervous state are two leading factors of the entire pathology of pregnancy.

The Carbolic-acid Treatment of Typhoid in India.—Captain R. C. Thacker, Royal Army Medical Corps (*British Medical Journal*, September 24th), gives his results of this treatment in the typhoid wards of the General Hospital, Nowshera. Seventy-nine cases were treated, with eleven deaths, giving the average mortality of 13.9 per cent. All the cases were diagnosed four times over by different officers. The treatment was as follows:

On the arrival of the convoy of patients from the railway station they were invariably at once seen and examined, after being thoroughly washed and cleansed and placed on a comfortable spring mattress with clean sheets and body linen. Carbolic acid was then prescribed; four doses of four minims each, well diluted with iced water, were ordered in the twenty-four hours. This was supplemented during the night, if the skin was hot and burning and the temperature running high, by two full doses of ordinary diaphoretic mixture. The formula generally used for the carbolic acid was Calvert's pure carbolic acid, four minims; spirits of chloroform, fifteen minims; compound tincture of cardamom, twenty minims; with syrup and water to one fluid ounce. This mixture was kept in the ice box, and was thus administered cool and refreshing to the sufferers. Without any exception it was well tolerated by the stomach, caused no unpleasant symptoms, and was thoroughly liked by the patients as a palatable medicine. In fact, in more than one instance it was reported by the sister on duty that the patients frequently asked for an extra dose. This, though a trivial incident, showed that the medicine was liked, and that the patient had some faith in its efficacy, a point of no small importance when treating soldier patients.

Dietary. The principal article of diet consisted of

three pints of fresh-boiled milk of excellent and irreplaceable quality in the twenty-four hours; five ounces were given every two hours, and were supplemented by a pint of sound, carefully prepared chicken broth. Two pints of iced barley water flavored with lemon were also allowed as a cooling drink (four ounces every hour) if so desired. The enteric evacuations were examined daily with care, and on the first suspicion of "solid" curd appearing in the stools, or the slightest tendency to irritability of the stomach, the milk was either peptonized or alkalinized, the latter being usually carried out by the sister on duty by adding a powder containing sodium bicarbonate, potassium bicarbonate, and sodium chloride, of each six grains to each pint of milk. This simple procedure proved most beneficial and effectual in many cases.

Stimulants.—Owing to the weak and prostrate condition of many of the patients on arrival, brandy had in most cases to be administered early in small quantities freely diluted. If grave symptoms supervened, such as a dry, brown, tremulous tongue; quick, weak, and irregular pulse; rapidly failing first sound of the heart, and low muttering delirium, the amount was rapidly increased up to eight or ten ounces in the twenty-four hours, with a pint of champagne if necessary and indicated. Stimulants in grave and malignant cases of typhoid fever in India are, in the author's experience, well borne by the patient, and in most cases are essential to a thorough and sound convalescence.

Complications, the author regrets to say, were frequent and severe. Cardiac asthenia, hypostatic congestion of the lungs, hyperpyrexia, perforation, secondary bronchitis and pneumonia, tympanites, nervous symptoms, phlegmasia, and four cases of hemorrhage are enumerated. The treatment of these complications was as follows:

Hæmorrhage.—The quantity of milk given every two hours was at once reduced to half, and given iced; stimulants were stopped altogether if admissible, or at least reduced to a minimum. Ice in small quantities was given to suck and allay thirst; ice was applied over the right iliac fossa and abdomen generally by means of ice trays. An enema in the ward of Dover's powder, ten grains, tannic acid, twenty grains, in two ounces of mucilage of starch, which was kept ready, was administered. At the same time a mixture composed of gallic acid, aromatic sulphuric acid, and liquor opii sedativus was given by the mouth every hour for six doses if necessary. This method was introduced by Dr. Burney Yeo, who stated that "lives had been saved by the precaution of having it kept ready at hand," and the author quite endorsed his opinion. Turpentine was freely used in cases of protracted hæmorrhage, and found most beneficial. A combination of turpentine, fifteen minims, with ergotin, three grains, and ten minims of liquor opii sedativus was usually prescribed. Ergotinine was also given hypodermically in doses of $\frac{1}{100}$ grain every fourth hour.

Cardiac Asthenia.—Cardiac asthenia with hypostatic congestion of the lungs proved a most frequent, dangerous, and trying complication to deal with, owing to its sudden onset and rapidly fatal termination. Stimulants were given freely, and also combined with tincture of digitalis, ten minims, and liquor strychninæ, three minims, in half an ounce of brandy freely diluted. The most satisfactory results were obtained from the hypodermic injection of strychnine in doses of $\frac{1}{60}$ of a grain every four hours until some improvement was observed

in the first sound of the heart and in the pulse. The author has no hesitation in saying that many lives were saved by these injections of strychnine. In many of the cases it had to be exhibited from the first day of admission.

Hyperpyrexia.—Hyperpyrexia caused anxiety in several cases. It was treated by ice sponging, ice pack, ice to the head and neck, with ice trays suspended over the abdomen; and internally mistura diaphoretica, with small doses of potassium bromide. Powerful antipyretics were carefully avoided, owing to their depressing effects on the circulation.

Secondary Bronchitis and Pneumonia.—These complications were usually treated with diffusible stimulants and expectorants; counter-irritation by means of mustard and linseed-meal poultices, turpentine fomentations, and dry cupping.

Tympanites.—Tympanites was rare, and occurred in very few cases to anything like an excessive extent. It was readily controlled by the ice cradles suspended over the abdomen. Hot flannel stupes of turpentine and opium liniment also were used, and internally oil of turpentine in ten-minim doses every fourth hour.

Diarrhea.—Excessive diarrhoea gave very little trouble and caused no anxiety; it was easily controlled by ordinary astringents, while the amount of milk was diminished, peptonized, or alkalized as the symptoms indicated.

Nervous Symptoms.—Nervous symptoms in the majority of cases were slight and quickly yielded to opium, potassium bromide, and tincture of hyoscyamus judiciously administered.

Phlegmasia.—Phlegmasia occurred in four cases; the foot of the bed was elevated and the affected limb painted with equal parts of glycerin and belladonna liniment and then wrapped in cotton wool kept in position with a wide flannel bandage.

The author concludes with the following remarks:

The following favorable signs appeared after the administration of the acid:

1. A rapid cleaning of the tongue with the abolition of the characteristic unpleasant typhoid odor from the breath.

2. A sustained and remarkable lowering of the febrile temperature with a well-marked morning remission in many cases.

3. Marked improvement in the unpleasant odor from the stools, which in a few days became practically odorized.

4. Tympanites, diarrhoea, and delirium were rarely excessive and easily under control.

5. A most favorable convalescence with a sound recovery.

Solomon Right Again.—The *Indian Lancet* for November 16th quotes the following:

"In *Notes and Queries*," says the *New York Times*, "there is a story quoted written by Mir Muhammad Masum in 1660. An exiled prince meets a man who is carrying what are designated as 'hakku tubes.' Looking at the man, the prince discovers that just as long as the man holds the hakku tubes his entire interior economy is visible. The prince at once purchases the tubes. Coming to Ghuzni, he finds a patient. The King of Ghuzni is suffering from dyspepsia. There is good reason for the king feeling so uncomfortable, for when the hakku tubing is applied, it is discovered that the patient had swallowed not less than two water snakes."

Readers will then please observe that the X rays have been anticipated. The original of the story is found in Elliot's *History of India* by its own history. After a while we may discover that Noah's ark had water-tight bulkheads and twin screws."

Antistreptococcus Serum in Chaneroid.—Mr. James Moore, F.R.C.S. Edin. (*British Medical Journal*, November 26th), states that during the past eight months he has used antistreptococcus serum in forty-eight cases of acute inflammatory bubo, and in only seven cases did suppuration occur. He records two very interesting cases. From his experience with antistreptococcus serum in venereal sores and their complications, he has arrived at the following conclusion:

1. While recognizing the great importance of early local antiseptic treatment of the chaneroid, he believes that if five cubic centimetres of the serum are injected subcutaneously into each inguinal region in cases in which inflammatory bubo is likely to develop, it will prove a good prophylactic measure, and assist in healing the chaneroid.

2. If inflammatory bubo has already developed, and the acute inflammatory symptoms have not been present more than forty-eight hours, ten cubic centimetres injected into the inguinal region corresponding to the inflamed gland will cause resolution in the majority of cases.

3. If there is evidence of pus formation the serum may possibly limit the extension of the suppuration, but in this class of cases his results have been anything but satisfactory.

4. The serum should always be injected into the area drained by the infected gland, preferably the right and left inguinal region. He has not seen good results by injecting it into remote areas.

5. In phagedenic ulceration complicating venereal sores this serum would appear not only to neutralize the toxins in the blood, but also to bring about a healthy condition of the ulcer.

The Excision of Carbuncles.—Mr. Rushton Parker (*British Medical Journal*, November 26th) again calls attention to the subject of the complete extirpation of carbuncles. "The ordinary methods of palliative expectation and excision, in his opinion, in which Sir James Paget in his *Clinical Lectures* seems to concur, show no advantage of one course over the other. The two principal features of carbuncles are (1) pain and (2) liability to septic poisoning. Incision, he asserts, does not relieve the pain, and does nothing to prevent or arrest septic poisoning. It is a severe operation, requiring an anæsthetic, and is itself liable to be followed by septic poisoning through newly opened channels.

The case is quite different, he continues, with extirpation, which, however extensive, is not a much more severe operation than incision. But what a contrast in the result! Ask a patient the difference between what he thinks of it, and he replies, "I feel no pain whatever, only a little weariness." "I feel as if a load had been taken off me." The carbuncle is then excised, flamed, stretched, and antiseptic treatments, with a thorough extirpation are all that is needed, leaving only a wound in healthy tissue. It is a simple method of avoiding septic poisoning, which at present is really a life-long confinement to the patient's bed. When the patient is the person to be benefited, it is a simple and safe operation.

The extirpation of carbuncles is a simple operation, according to the foregoing, and is a most effective

just as rational as the excision of tuberculous glands, the scraping of lupus, and the removal of sloughs, while experience amply proves its value. Among the twelve cases hitherto reported by him, two were in women, situated on the face; the rest were in men. In one or two cases the relief to pain was not complete, and this he attributes to insufficient thoroughness in the excision. If the carbuncle is very soft there may be a temptation to rely on thorough scraping alone, and so to leave some of the disease behind. It is advisable to remove all, and to thoroughly cut away with knife or scissors what can not be scraped.

He then reports five more cases, of which one proved fatal. This he attributes to not critically watching the sore to detect any reappearance of the carbuncular process, and not removing thoroughly all recognizable diseased parts. Diseased spots he touches with pure carbolic acid which effectually renders them aseptic and is at the same time anodyne.

Bichromate of Potassium in the Treatment of Chronic Gastric Ulcer.—Dr. T. McHardy (*Scottish Medical and Surgical Journal* for December) refers to the researches of Professor Fraser, of Edinburgh, on the value of bichromate of potassium in chronic gastric disease, and records the case of a woman under his care who had suffered from chronic gastric ulcer for twenty years. She had been bedridden for a year; the stomach was very irritable, rebelling on the most trifling indiscretion in diet. Epigastric pain was so severe as to demand constant recourse to morphine. Vomiting and hæmatemesis accompanied all ingestion of food, and nutrition had to be accomplished *per anum*. Anæmia and emaciation were marked, there was anxiety, with quick, weak, and irregular pulse, and dry coated tongue. Flatulence and constipation, with dry, hard stools of a very dark color, were present, often containing bloody mucus. The abdomen was tense and distended, the stomach dilated and very tender on pressure, and a distinct peristaltic action could be felt extending from the fundus to the pylorus.

Pain was referred to two circumscribed spots, each about the size of a dime, lying over the smaller curvature, and often shooting through to the back, especially to the left of the last dorsal vertebra. Occasionally pain became more widely distributed, and, when flatulence was severe, it extended into the scapular and clavicular regions. As food had been withheld for some days, the vomited matter contained only blood and mucus, which threw out a sour, disagreeable odor, and gave a strongly acid reaction.

To get rid of the mucus, and render the stomach as empty as possible, he first washed it out with a weak solution of boric acid. This had the direct effect of increasing the hæmorrhage, but after a subcutaneous injection of ergotin, and the application of an ice-bag to the epigastrium, this symptom quickly subsided. On May 11, 1897, he first administered a sixteenth of a grain of bichromate of potassium, dissolved in an ounce of distilled water. This was immediately followed by such violent pain and sickness that he was reluctantly compelled to seek relief by an injection of morphine. After an interval of six hours, the bichromate treatment was renewed, and on this occasion he observed a decided improvement in the consequent pain and sickness, and although these unpleasant consequences continued to follow each successive dose for a time, still, he noted a gradual abatement in their duration and in

tensity up to the fifth day, when the pain completely ceased. The sickness, however, persisted during the following week, but in a greatly modified degree. On the 18th of May the dose was increased to a twelfth of a grain, and administered every sixth hour as formerly. This was continued up to June 8th, by which date the entire group of gastric symptoms had entirely subsided.

As it was now evident that the anæmia had in no way benefited by the treatment, carbonate of iron and a solution of red marrow were substituted for the potassium salt. Under this the anæmia rapidly disappeared, and, after being continued for a month, the only remaining symptom was constipation. As the stomach at first rejected every form of nourishment given, feeding by nutrient enemata was maintained for a week. She was then allowed a tablespoonful of milk and lime-water, repeated every half hour. After some days, milk-arrowroot, yolk of egg, and bread pap were cautiously added to the dietary, and at the end of six weeks she was permitted to share the common food of the family. On visiting her on the 12th of February last I found her in excellent health and spirits. Her gastric troubles, with the exception of a mild form of indigestion, had never recurred. Her bodily weight had increased three stones, and she could discharge with comfort her usual household duties.

The author calls attention to the fact that vomiting, which previously had been a most distressing symptom, ceased after the first dose of the bichromate. This result he has experienced in other cases, and in a recent case of chronic gastritis with persistent vomiting, which had defied several different forms of treatment, its administration was attended by the happiest results.

Fictitious Appendicular Inflammation.—We hear so much of the treatment of appendicular inflammation nowadays, what with the advocates of delay and those of operation immediately on diagnosis, that it may be a useful caution to call attention to conditions liable to be mistaken for that disease. Dr. Donald Rood (*Clinical Journal*, December 14th) quotes the following case from his clinic in the West London Hospital: "This child, while walking, was tripped up by a man and fell. He complained of pain in the abdomen, and on examining him I found that he had swelling in the appendicular region on the right side. Here the swelling ran up from the brim of the pelvis, encroaching upon the iliac region. I did not think the trouble in this case was due to the appendix, but to cellulitis set up by definite strain. He has now been in a week, and nearly the whole swelling has disappeared; there remains only a small portion of infiltrated tissue."

The Curability of Pulmonary Tuberculosis by Intensive Mineralization.—Dr. N. Dimitropol, of Bucharest (*Gazette hebdomadaire de médecine et de chirurgie*, July 17, 1898), says that the ætiological study of pulmonary tuberculosis shows that the most favorable soil for the development of Koch's bacillus is that in which there is a deficiency of those organic and chemical elements which by combining with albuminoids insure the resistance of the organism. Consequently the treatment which, according to Dr. Dimitropol, is at the same time the most rational and the most efficacious, resolves itself into an intensive mineralization of the organism combined with substantial alimentation both natural and artificial. It is only by this means that one can build up the broken down economy of a tuberculous subject and not only prevent the lungs from becoming further

tuberculous, but favor also the sclerotic or cretaceous cicatrization of the part attacked.

The following is Dr. Dimitropol's mode of treatment. The patient is given daily, for thirty or forty days, each morning a nutritive mixture composed thus:

- ℞ Yolk of eggs 4 or 5 in number;
Pepsin 15 grains;
Hot milk 12½ ounces;

the whole being well beaten up for five minutes and flavored, according to taste, with a little vanilla.

Ten minutes later a slice of bread and butter well salted to the extent of at least half a teaspoonful of kitchen salt, and weighing about twelve ounces and a half, is given. When the patients are very wasted, there should be administered, in addition, nutrient enemata composed as follows:

- ℞ Yolk of eggs 4 in number;
Liquid peptone 37½ grains;
Chloride of sodium 75 "
Hot concentrated bou-
illon 1,200 to 1,500 grains.

This enema, well beaten up, should be slowly introduced by means of an irrigator. Each enema should be preceded by an evacuating enema.

The patient takes daily, moreover, from ninety to a hundred and eighty grains of tribasic phosphate of calcium and from thirty to sixty grains of phosphate of sodium, as in the following formula:

- ℞ Tribasic phosphate of calcium .. 30 grains;
Phosphate of sodium 7½ "

in each powder. From three to six daily.

After each meal the patient must also take in half a glass of water from two to four teaspoonfuls of hydrochlorophosphate of calcium in ten-per-cent. solution.

All the drugs enumerated should be administered in a graduated manner for forty days; toward the end of this time it is necessary to diminish the dose and to continue for six months and to recommence later with intermissions of fifteen days a month.

Further, there is prescribed daily for thirty or forty days two hundred and twenty-five grains of common salt mixed with food already salted in the ordinary culinary preparation. It is necessary for the patients to take indefinitely from ninety to a hundred and twenty grains of salt daily.

For diet from sixteen to eighteen ounces of meat, a quart of milk, three eggs prepared to the patient's taste, fish and vegetables in habitual quantity, but chosen by preference from among those most rich in nitrogen, such as lentils, haricots, peas, etc.

Such is in general lines the treatment of the Roumanian physician; it rests with the physician to apply it according to the stage of the disease, the age and constitution of the subject, taking care to proceed gradually in every case, and to keep always in view the tolerance of the patient both as regards alimentation, natural and artificial, and mineral treatment. The same mode of treatment may be employed in the case of mere serofulous and lymphatic subjects, excluding the artificial alimentation. Excellent results are claimed for it.

The Commercialism of Christian Science. That the "Almighty Dollar" holds a still higher post of worship in the Christian Science cult than it is popularly supposed to hold in the religion of the day is shown by the following story, which we quote from the *Public Health Journal* for December: "Some two years ago I was attacked by an affection of the eye (a detachment

of the retina), an ailment I believe incurable by medical science," says a contributor to *London Truth*. "I was persuaded to consult the Christian Scientists, which, out of curiosity, I consented to do. I wrote to Mrs. Ward, then, I believe, 'chief prophetess' in the sect in London. I wrote to her, making the following offer: 'That in the event of a successful treatment she should receive £200 as remuneration for her services; in the event of a non-successful treatment the nominal fee of 2s. 6d.' In answer she wrote that Christian Science did not labor for money, and declined my offer. I wrote again, saying I would be prepared to give this sum (£200) to any charity she might name, she retaining only such remuneration as she thought fit. In answer she replied she 'preferred a guinea a week.'"

The inane folly of this cult is not so distressing as its dishonorable and unblushing hypocrisy. We can respect honest differences of opinion even though they may appear in the light of knowledge puerile and hopelessly ignorant. A kindly feeling of sympathetic pity is the one evoked by such a condition. Even the open roguery of the common charlatan can be met with some respect because it is open. But the hypocrisy of the professional Christian Science healer can provoke nothing but loathing and disgust.

The Treatment of Lupus by Thyroid Colloid.—Dr. Raymond Crawford (*Therapeutic Gazette*, December) reports that at a recent meeting of the Clinical Society of London Mr. Pearce Gould showed a case of lupus of the whole face treated by thyroid colloid with the most striking results. In three weeks from commencing the treatment the whole ulcerated surface had completely healed, and the scar tissue was undergoing transformation from a hard hidebound state into a soft pliable condition. Incidentally Dr. Pringle alluded to a series of cases treated by thyroid colloid; he was of opinion that the thyroid colloid was by far the most efficacious preparation of the thyroid gland that is now used medicinally. He was able to point to remarkable results in a considerable number of cases, but his experience of the after history led him to believe that the cure was seldom if ever permanent, as foci of lupoid tissue always remained behind to light up the disease afresh. It was not made quite clear whether Pearce Gould's was a true case of lupus granuloma, or whether it belonged rather to the category of serofuloderma. Dermatologists seem to agree that the thyroid colloid, like the serum preparations, is much more efficacious in cases of serofuloderma than in cases of true lupus granuloma.

Sterilization of Drinking Water.—Schmubare (*Riforma medica*, November 1898) recommends to each quart of water the addition of three drops of the following solution:

- ℞ Bromine 300 grains
Bromide of potassium 500 "
Water 1,500 minims

After five minutes, neutralize with an equal quantity of solution of monogenic soda ash. A limpid, tasteless liquid is thus obtained. When the water is very impure and strongly colored, a pinch of the bromine solution is added at a time to impart a yellowish color, which permits the impurities to settle.

The Treatment of Pneumonia with Salicylic Acid.—Baker (*Chirurgist*, November 1898) has treated 100 cases of salicylic acid in the treatment of pneumonia. Thus

drug, according to him, loosens the fibrinous coagulum and causes the expectoration to lose its viscosity. He considers it a true abortive of pneumonia. To children, one grain and a half may be given every hour or every two hours. To adults, seven grains and a half every two or three hours. It is to be dissolved in a small quantity of hot sugar water, milk, or chocolate. It is contraindicated in cardiac affections and where there is collapse.

The Diagnosis of Streptococcus Pneumonia.—Lewin (*Bohnitsch. Gas. Bohemia*, No. 16, 1898; *Clinica moderna*, November 23d) arrives at the conclusion, from a study of three cases, that in the streptococcus form of pneumonia the temperature maintains a more or less intermittent character, with rigors and sweating at the beginning of each successive access; the duration of the disease is from one to two months, and the bacteriological examination of the sputum, as of the splenic juice, obtained by aspiration of the spleen, shows streptococci only. In all other respects the clinical picture of this form of pneumonia is exactly like that of the bronchopneumonia of diplococcus.

Faradism in Dilatation of the Os Uteri.—Dr. Jeanne W. Martine (*Journal of Electrotherapeutics*, December) describes a dilator, similar to Nott's dilator, which is connected with one pole of a faradaic battery by one terminal, and by another with a large pad which is placed on the abdomen. The anæsthetic effects of the fine wire faradaic coil are, according to the author, of material assistance.

Dr. Martine says:

"I have used this instrument in a variety of cases. I wish to mention one class where the physician does not, as a rule, consider division necessary. I mean in subinvolution complicated with endometritis: here division causes, first, drainage. Secondly, it acts as massage and sets up a better circulation. The electricity helps us here by its stimulating properties more than its anæsthetic effects, as the uterus is rarely sensitive in subinvolution. My electrical dilator is one of my best friends in nearly all cases of uterine disease, and it can of course be used with the galvanic as well as faradaic currents, and I have yet to see a case so sensitive that I could not dilate by its judicious use. It is indeed simply wonderful how the long, fine wire coil of an Englemann faradaic battery will numb the parts so that little or no distress is felt. I, however, give myself plenty of time in treating sensitive subjects and only do very little at each treatment. One important point I wish to mention: The anæsthetic effect of electricity, faradism at least, is only felt while the current is turned on, and this is the objection to using graduated sounds, much pain being caused by withdrawing, turning off current, and reintroducing a larger size. Theoretically why this is the case I can not say; practically I know it to be so; but the instrument I have described allows current to flow while we are dilating and overcomes that difficulty."

This procedure might be worth a trial in stricture of the urethra, though the catalytic properties of the faradaic current are slight as compared with those of galvanism.

A New Behring Patent. According to the Berlin correspondent of the *British Medical Journal* for December 17th, Prof. or Behring and a Dr. Ruppel have applied for a German patent for a tuberculosis serum.

His application alleges "a method for producing a highly poisonous and immunifying substance from tubercle bacilli or from cultures of tubercle bacilli."

Lawyers' Fees and Doctors' Fees.—The *Medical News* for December 24th in an editorial comments on the case of a distinguished New York lawyer who had received a \$5,000 fee and forgotten all about it, as follows:

No one, we are sure, has the slightest doubt that the distinguished lawyer who denied absolutely having received the aforesaid fee, though it was afterward clearly proved that he had received it, was eminently sincere in his denial. It would simply seem that \$5,000 fees are such common occurrences in a great lawyer's everyday life that he can not reasonably be expected to recall their receipt with absolute assurance if any considerable time has elapsed since the event, or if he happens to have been at the moment of its presentation so busy with other or more important matters as not to have made an act of reflex consciousness and so impressed the trifle on his memory.

But why is it, then, that when the question of doctors' fees gets into court lawyers always insist on their excessiveness? One might think that the generous fees they collect themselves would make them realize that the value of the work of a liberal profession can not be estimated by any cut and dried rules of trade, or commercial deductions as to the value of time. The value of a service in law depends upon the worth of it to the party for whom it is performed, and the following out of exactly the same steps of legal procedure has a very variable fee for its reward according to the circumstances of the client for whom it is done. Why the same rule should not hold for the services of a physician does not seem very clear. But the attempt to put such a principle into action by the doctor brings down upon him, in case of legal complications, the malediction of judge and lawyer, and almost inevitably leads to the extremely unpleasant predicament of having to accept a fee made more or less arbitrarily smaller by the court. We humbly submit that all this seems scarcely in accordance with the American spirit of fairness or with the high principles of equity our legal brethren laud so justly. Let us hope that this little public reminder that "there are others" will give them a fellow feeling that will make them wondrous kind to the little seeming exaggerations that their brothers of the healing art may commit in the making out of bills.

A Tropical School of Medicine in London.—Our usually accurate contemporary, the *Philadelphia Medical Journal*, in its issue for December 24th has a paragraph with this heading. London, we are informed, is a pretty "hot" place—in fact, quite "sultry" in some respects; but for all that it is some degrees north of the tropic of Cancer. A School of Tropical Medicine is, however, what we believe our contemporary to mean.

The Chair of Surgery in the University of California.—We learn from the *Philadelphia Medical Journal* for December 24th that Dr. T. W. Huntington, of Sacramento, has been elected assistant professor of surgery in the University of California. Dr. Huntington is well known throughout northern California as an able surgeon, having been for years in charge of the Southern Pacific Railway Company's base hospital at Sacramento, and the appointment will no doubt be a very popular one.

as we can remember, with apologies to the unknown author whose name we are unable to furnish, and to the periodical (if any) in which it made its first appearance. The song runs as follows:

Ours is a wise and wondrous age, an age of thought and science, sir;

To error, ignorance, and bliss, we've fairly bid defiance, sir;

"Professors" everywhere abound, both in and out of colleges,

And all agog to cram our nob's with "isms" and with "ologies."

With a bow, wow, wow.

Ri tol the riddle, fol the riddle, bow, wow, wow.

Philosophy, as you're aware, material and mental, sir, At one extreme is "positive," at t'other "transcendental," sir;

And each of us who nowadays would speculate *en règle*, If he can't run the rig with Comte must take the tips from Hegel,

With a bow, wow, wow, etc.

We can't assume, so Comte affirms, a first or final cause, sir;

Phenomena are all we know, their order, and their laws, sir;

While Hegel's modest formula, a single line to sum in, Is nothing is, and nothing's not, but everything's becomin',

With a bow, wow, wow, etc.

Development is all the go, of course, with Herbert Spencer,

Who cares a little more than Comte about the why and whence, sir;

Appearances, he seems to think, do not exhaust totality, But indicate that underneath there's some "unknown reality,"

With a bow, wow, wow, etc.

Then Darwin, too, who leads the throng *in vulgum roces spargere*,

Maintains humanity is nought except a big menagerie, The progeny of tailless apes, sharp-eared and puggy-nosed, sir,

Who nightly climbed their "family trees" and on the tops reposed, sir,

With a bow, wow, wow, etc.

Imaginative sparks, you know, electric currents kindle, sir,

On Alpine heights, or at Belfast, within the brain of Tyndall, sir;

His late address some people hold was flowery, vague, and vapory,

And represents the "classic nude" when stripped of all its Drapery,

With a bow, wow, wow, etc.

Professor Huxley has essayed to bridge across the chasm, sir,

"Twixt matter dead and matter quick by means of protoplasm, sir;

And to his doctrine now subjoins this further "grand attraction,"

That con con in man and brute is simply reflex action,

With a bow, wow, wow, etc.

George Henry Lewes, I'm informed, has gone off quite hysterical

About that feeble, foolish thing, the theory metempsychical;

And only finds relief, 'tis said, from nervous throes and spasms, sir,

By banging straight at Huxley's head a brace of brand-new "plasmis," sir,

With a bow, wow, wow, etc.

Then Stanley Jevons will insist, in language quite emphatical,

The proper way to treat *all* things is purely mathematical,

Since we as individual men, communities and nations, sir,

Are clearly angles, lines, and squares, eubes, circles, and equations, sir,

With a bow, wow, wow, etc.

Such are the philosophic views I've ventured now to versify

And, if I may invent the term, in some degree to tersify. Among them all, I'm bold to say, fair room for choice you'll find, sir,

And if you don't, why, then you won't, and I for one shan't mind, sir,

With a bow, wow, wow,

Ri tol the riddle, fol the riddle, bow, wow, wow!

Abortefacient Nostrums.—The recent attempt to blackmail women in England for purchasing advertised abortefacient nostrums has set our energetic contemporary the *Lancet* at work on another investigation commission. The issue for December 17th contains the details of its "critical and analytical inquiry" into two of these nostrums. In the first, savine appeared to be the active constituent of the pills, while in the second case the results of the examination suggested that the liquid was senna and rue tea.

The letters from the *Lancet* to purchase the nostrums were so written as to leave no possible doubt in the reader's mind that the purpose for which the purchase was being made was the induction of abortion. The *Lancet* says: "If any one should find in our conduct here matter for unfavorable comment on the ground that we have tempted Mr. Thomas Ottey to sin, we have to say that we found in him so willing an accomplice that we can hardly have been his seducers, and, secondly, that it is useless to fight a certain sort of stink with rose water."

Professor Stricker's Successor.—According to the *International Medical Magazine* for December, Philip Knoll, professor of experimental pathology at the German University of Prague, is to succeed to the chair of experimental pathology in the University of Vienna, made vacant by the death of Professor Stricker.

The Queen of Portugal and the Study of Medicine.—In our issue for December 3d we quoted from the *Woman's Medical Journal* a paragraph to the effect that Queen Amelia of Portugal had recently graduated as a doctor, and that her first patient was her husband, King Charles I, whom she was treating for obesity. We now learn from the *Medical News* for December 24th that the *British Medical Journal* cries *peccavi* to the indictment of having been the originator, no doubt inadvertently, of this statement, which has been officially contradicted by the Lord High Chamberlain of Portugal.

Original Communications.

SOME CASES TREATED BY
HYPNOTISM AND SUGGESTION.*

By R. OSGOOD MASON, M.D.

IN all investigations claiming to be scientific in character, it is just and necessary to see to it that the facts from which conclusions are drawn are solid. Hypnotism from a scientific standpoint, and in its relation to the medical profession, is still on trial, not as regards its reality; that is conceded. Something which we agree to call hypnotism produces effects. But questions remain regarding its nature and its uses.

I do not for a moment indulge the fancy that I shall be able to answer these questions to your satisfaction, or my own, this evening, nor is that my present purpose. Years may elapse before that desirable end can be reached; but it is only by carefully considering the facts as they are observed and reported that an approximation to a solution of these problems may be made.

To work effectively, the problems must be clearly in mind, and the relation of the facts made evident. For example, concerning the nature of hypnotism, these questions are not yet settled beyond controversy:

1. Is any special influence or effluence passing from the operator to the subject concerned in any of the phenomena of hypnotism?
2. Is the mind or will of the operator an element to be reckoned with?
3. Is the whole matter subjective, pertaining to the patient alone?

Of course, I am aware that by many acknowledged representatives of science the first of these questions is thrown out of court. The second is scarcely in better condition; while the third is received and put forward as the explanation of what is accepted as hypnotism.

Braid and Carpenter, Bernheim and Heidenhain are names to be considered and respected; and they answer the first and second of these questions emphatically in the negative; while Elliotson, Esdaile, Gurney, Richet, and a host of good observers have witnessed phenomena which led them to answer the same questions in the affirmative.

So it seems the part of wisdom to keep the court open and see if new evidence appears.

Then, again, regarding the uses of hypnotism, conclusions are widely different—some considering it not only of very little if any use, but in general absolutely harmful; while others find it not only harmless, but of very marked and far-reaching value. It is evident that some of these conclusions are erroneous, and must have been drawn from a small field of observation—probably only personal—disregarding for the most part the ob-

servations of others, a course which certainly is not always wise; for it must be remembered that the phenomena connected with hypnotism are singularly varied in character. One observer may have witnessed but few of these, or one operator might succeed admirably in the use of hypnotism as a therapeutic agent and not be able to exhibit tricky and unusual phenomena; and any one who has not studied carefully many varieties of phenomena, and with many different subjects, is illy qualified to decide offhand that an alleged phenomenon is not a fact or is not possible. Science is perfectly right to be discriminating in regard to the reported facts and phenomena which are new and unusual; but it may not be wise to reject facts altogether, simply because they do not fall within certain prescribed lines usually known as the laws of Nature, for these laws are variable according to our knowledge of Nature. They are simply the formulæ by which the behavior of Nature is expressed, so far as we know that behavior at the present time, and no further. Yesterday we declared that light could not pass through an inch-thick wooden plank; to-day the interior of a box constructed of such material is illuminated and a coin inclosed in it is photographed.

This is only a modern instance, and is perhaps of minor import; but it is one of a series of surprises from Copernicus to the magician of Menlo Park, which, after a year or a generation, as the case might be, have forced men to revise their formulas of Nature's action in the physical world.

Within the last quarter of a century the attention of all classes of persons has more than ever before been directed to unusual psychic phenomena; and different classes of observers view them from different standpoints and in different lights. One class at once refers the unexplained and mysterious to the supernatural; another class, having scientific tastes and tendencies, at once sets about finding a way of referring them to natural causes, of seeing in them only links in one unbroken chain of antecedents and consequences; but even here, in a field of which we actually know so little, we attempt to bind Nature with laws of our own making, and perhaps reject valuable facts, or hesitate to receive them, because they seem to contradict or contravene some conventional formula which is taken for Nature's ultimatum regarding psychic action.

It is not the acceptance of any particular psychic phenomenon, nor any particular phase of psychic investigation, that I would favorably discuss, but simply a judicial attitude, an open mind, and wide view of a field of investigation which we, as representatives of at least one department of science, and as practical physicians, may find it important to cultivate.

The cases treated by hypnotism and suggestion which I have to report this evening may be conveniently arranged in four classes:

1. Those of a purely psychical character

* Read before the Section in Neurology and Psychiatry of the New York Academy of Medicine, October 28, 1898.

2. Cases illustrating the effect of suggestion on physiological processes.

3. The treatment of physical ailments.

4. The educational uses of hypnotism.

CASE I.—Mrs. C., forty-one years of age, married. Disease: Melancholia, with dominant idea of absolute general inability. She can not walk a block without entire failure of strength; can not read ten lines without feeling that the brain is giving out. For the same reason she can not visit, attend church, nor go to any place of amusement. Sleep is disturbed and unrefreshing. She is generally indifferent, helpless, and despondent. She has already been an inmate of a sanitarium. She came here from a large Western town to consult an eminent specialist in nervous diseases; no organic disease was discovered, and she was kindly referred to me. She came under my care October 10, 1896. I was able to secure a quiet subjective condition between sleeping and waking, but without loss of consciousness. She heard the suggestions in an imperfect, indifferent way, as if at a great distance. Suggestions were as follows: You have no organic disease; there is no reason why you should not be a perfectly well woman. You will *become* perfectly well.

First of all, your appetite and digestion will improve; your sleep will be undisturbed, quiet, and refreshing. All this cloud of discouragement and despondency which is hanging over you will be lifted from your mind and will disappear; you will see things in a new light—bright and cheerful—and you will be greatly encouraged.

These suggestions were repeated quietly, but firmly and confidently, four or five times, with intervals of silence, the whole treatment occupying about half an hour. She was directed to return in two days. The report of her attendant on her return was that there was an entire change in the condition of her mind. She slept well, was cheerful, interested, and hopeful. The same suggestions were given, with the addition that she would be able to walk without fatigue and begin to read with ease and enjoyment.

Between October 10th and October 30th she received six treatments, each report showing marked improvement in her condition, both physical and mental; so that on the latter date she reported herself, and was reported by her attendant—a sister who was accustomed to see her in health—as entirely well. I directed that she should go about and enjoy herself, remain away from me two weeks, and then return. She did so, and on November 14th reported that she was perfectly well; and she remarked, "No one knows how wretched I was five weeks ago, and so no one but myself can appreciate how great is the change."

Two days later she started for her home in the West, where she took her proper place in her family. I have heard several times since that there has been no relapse and that she remains well.

A form of what is usually a purely psychic disturbance is that which relates to the different overwhelming fears or *phobias*—the mis-named hydrophobia excepted.

One of the most common and at the same time most distressing of these is the excessive and uncontrollable fear of thunder and lightning, which may be properly named tonitruophobia. I have observed several instances

of the excellent effect of suggestion in removing this condition. I will relate a single one:

CASE II.—The daughter of a medical friend with whom I was spending some time in the summer was about eighteen years of age and in perfect health. She was greatly afflicted, however, by this unconquerable fear of thunder and lightning—so much so as at times to deprive her of all presence of mind or power of action; and the nervous shock was quite serious in its effects.

On the approach of a thunderstorm she immediately shut herself up in the closest and darkest available place, and remained there until the disturbing influence had passed by. She was an excellent hypnotic subject, and being put in the deep sleep, I suggested that thunder and lightning were usually perfectly harmless; that she had nothing to fear from them, and that now, hereafter, all her dread and terror of them would entirely disappear. She would have no dread, no terror, and no nervous shock, but her mind would be calm and composed, and she would have perfect self-control.

This was repeated with positive assurance several times, and then she was awakened.

The test of the treatment soon came in the form of a terrific country thunderstorm—trying even to the strongest nerves. This young lady, instead of seeking her accustomed seclusion, seemed perfectly fearless, and busied herself with soothing and encouraging the younger children and servants. She was entirely composed and acted with perfect self-control.

Under this same heading of psychic disturbances might be mentioned cases of lifelong and very troublesome somnambulism, and also of night terror in young children, which have been permanently dismissed by a single treatment by suggestion.

The second class of cases to which I would call your attention illustrates the effect of hypnotism and suggestion upon *physiological processes*. By this is meant such processes as digestion, assimilation, absorption, the circulation of the blood, the menstrual function, and lactation. I will refer to a case where the function of the lower bowel was influenced by suggestion.

CASE III.—Miss A. was a bright, intelligent German girl twenty-six years of age, free from any hysterical or nervous symptoms. She was the subject of obstinate constipation; her movements seldom occurred without medicine, and she often went for four or five days without relief. She was easily hypnotized, and one evening, while in the hypnotic condition, she was given a teaspoonful of pure water with the suggestion that it was a bitter dose, but very powerful and would give a very free movement from the bowels at seven o'clock the following morning. She took the water with many grimaces at its bitter taste, and the suggestion was realized with great promptness and energy at exactly seven o'clock in the morning. I could give equally striking examples of the prompt effect of suggestion upon the menstrual function, and upon lactation. I will give an instance of its effect upon the vasomotor system.

CASE IV.—Miss B., forty-two years of age, though in appearance not over thirty, has a ruddy complexion, a bright, intelligent face, and is a teacher by occupation.

She was afflicted with inordinate and excessive blush-

ing. It occurred mostly in company, and especially when addressed by men; then the excessive flush came to her face so as to attract the attention of every one near her. But the most distressing symptom was the mental confusion which accompanied it. The brain seemed to be overwhelmed at the same time: she became dazed, her presence of mind entirely forsook her, she could command neither thought nor word, and was utterly unable to reply. This, of course, often made her appear ridiculous and caused her intense mortification.

She came to me March 30, 1898. A fairly subjective and suggestive condition was secured, with even light sleep. I suggested: You will lose your excessive self-consciousness in the presence of men; you will be calm and confident when addressed by them. The nervous system, and especially the vasomotor system, will act normally; the flow of blood to the capillaries of the face will be restrained, become normal, and the excessive blushing will cease.

According to appointment, she returned two days later. She was greatly impressed with the effect of her treatment; the blushing and confusion were decidedly diminished; the improvement was so marked that there was no mistaking it.

I now learned the following facts: She had two sisters, both of whom have the same trouble and manifested under similar circumstances; also a niece, the daughter of her brother, a girl ten years of age. She herself also had the trouble when a little girl, and even then it was in the presence of boys, as later it was in the presence of men. It was entirely without any sexual ideas or emotion. She spoke with perfect frankness; said that she had been a boy and man hater, avoiding and even insulting them. As she expressed it, she never had any womanly feeling toward men until she was twenty-seven years of age, when there was a decided change in that respect. Since then she had seemed to be attractive to men, had many admirers, and a love affair which had an unhappy ending; but through all these experiences the blushing and confusion remained the same.

I suggested as follows: The old thought of mental confusion, associated with your blushing, even from childhood, will now be removed and dismissed from your mind. It will no longer affect your thought or life. You will be able to converse with men without embarrassment or constraint. Other suggestions made were similar to those at her former treatment.

A third treatment was given April 7th, at which time she reported *very marked* improvement, both as regards blushing and the power of self-control. So great was the improvement as to be a surprise both to herself and her friends.

As she had to leave the city, I instructed her in regard to auto-suggestion while going to sleep at night, and furnished her a formula similar to that I had used.

A month ago I received a letter from her from a distant city expressing great satisfaction at her improved condition. She had also been able to use auto-suggestion successfully, and felt that if there was an return of the trouble she had the remedy in her own hands.

In this connection, at the suggestion of your chairman, I will refer to an incident which occurred thirteen years ago. It was in relation to a case of traumatic neuritis of thirty-five years' duration, and which terminated fatally by exhaustion when the patient was only thirty-eight years of age. Every known remedy was made use of, including repeated section of the nerves

involved, as advised by the most eminent neurologists and surgeons both here and in Europe.

For the last seven years of her life the patient was under the care of Dr. Mary Putnam Jacobi, with the exception of three months and a half immediately preceding her death, when Dr. Jacobi was away.

The case was fully reported in the *American Journal of the Medical Sciences* for July, 1885. I will designate it as—

CASE V.—This patient, Miss T., came under my care June 9, 1885. The affected right hand and arm were of a dark-purplish color, cold, disagreeable to the touch, and entirely useless. The muscles were atrophied and the fingers contracted. They had been in this condition for years. About three weeks before her death I was one day speaking to her about hypnotism, and suggested a trial as a relief, temporary at least, to some of her sufferings. She assented, and by monotonous passes from head to feet, as she was lying in bed, she was put into the condition of light sleep, with easily induced rigidity of a finger or the hand. After ten or fifteen minutes of sleep I noticed that the affected hand had become normal in color. I took hold of it and laid it palm down upon the counterpane. The fingers were easily straightened out, and they retained their extended position. I placed the hand in a comfortable position and made a few passes from the shoulder to the tips of the fingers.

No suggestions of any kind were made. The period of suggestion had not then arrived. Bernheim's book did not appear even in France until the following year, and in English not till three years later.

I allowed my patient to sleep quietly for an hour, and then awoke her. Her hand still remained extended upon the counterpane—a really beautiful object, most delicately white, but still lifelike, a wonderful contrast to the dead thing it seemed before she went to sleep.

Presently I called her attention to her hand, which she gazed at with the greatest astonishment and pleasure.

She awoke with a general feeling of well-being and comfort, quite unusual to her, and it continued several hours; but at length the old conditions gradually returned, and with them the purple color and ungraceful contraction of the hand.

The treatment was repeated on two other occasions with the same result. After the second treatment, looking at her hand with a pleased and humorous expression, she exclaimed: "Well! well! When I go to my next ball I shall surely want you to come and beautify my hand." This incident was not mentioned in the printed report, but it seems to me a fair example of the effect of hypnotism *alone* upon physiological processes.

As an illustration of my third division, the effect of hypnotism and suggestion upon *pathological conditions*, I will present the following:

CASE VI.—Mrs. A., aged twenty-eight years, married; confined with her third child October 23, 1897. Two weeks previous to her confinement the two children which she then had were down with measles. She lived in an apartment, front and back rooms with two bedrooms between. Sanitation and disinfection were attended to as well as possible under the circumstances. Confinement was normal, and everything went fairly well until the fifth day, when I found her with a temperature of 103° F., excessive headache, flushed face, mental confusion, no sleep for twenty-four hours past;

pulse 116, hard, and irregular. There was great pain in the back and limbs, and the whole was accompanied by an overwhelming feeling of apprehension.

No milk had appeared and there was no fullness of the breasts. She had never been hypnotized, and I had never spoken to her of hypnotism, nor did I now, but her condition was so pitiable that as I stood by her bed I placed my hand soothingly upon her forehead, then made light passes over it with gentle touches; in four or five minutes her eyelids quivered and closed, and presently she was asleep. Passes made over an outstretched finger made it rigid. Undoubtedly she was in the deep hypnotic sleep. I then made passes away from her head and down her body, from head to feet, for ten minutes, then allowed her to sleep fifteen minutes; suggested that her headache and all her pains would at once disappear, her mind become clear, and that she would have abundant sleep; I then suggested that she would awake feeling greatly refreshed when I counted five. She awoke promptly as suggested, and was perfectly free from pain; her temperature had fallen a degree and a half, and all her confusion and apprehension had disappeared. She slept most of the afternoon and night. The next day I thoroughly washed out the uterus with a one-per-cent. solution of lysol and left her comfortable. The following day, when I called, she was still comfortable, but complained bitterly that she tasted the wash I had used all the time, that it was intensely disagreeable, and even nauseating. I hypnotized her very quickly and suggested that she would awake quite free from the taste or any disagreeable effect of the lysol. On awakening her, every trace of the objectionable taste had disappeared. She made a slow but perfect recovery.

CASE VII.—C. L., actor, forty-two years old, was brought to me April 30, 1898, for treatment for both the alcohol and morphine habit. He had recently been taking his quart or more of whisky and ten to fifteen grains of morphine daily. Within the past few days he had left off about half of each drug, and was in very bad shape, though still able to be about. He could take no breakfast, and very little food of any kind; suffered severe pains in his legs and back; was bathed in cold perspiration, was weak and depressed, hardly hoping to be cured.

Hypnotized, and found him an excellent subject. Suggested a very little decrease in his drugs, but assured him of final success; also that his pains would be greatly relieved, that he would sleep at night straight on until seven o'clock in the morning, that he would awake refreshed and eat a good breakfast, would feel stronger, and come to me for treatment the following day. These suggestions were almost exactly fulfilled. He had slept, taken food, and retained it perfectly.

I then suggested that he should reduce his whisky to four fair drinks a day, and his morphine to three grains; and I directed carefully how each should be taken; other suggestions similar to those the day before. These suggestions were also carried out almost to the letter without his knowing what they were. Asking him why he did it, he said he did not know, only he felt that he *could*, and that it was *best*.

During the next four days the whisky was diminished and dropped entirely.

I then commenced reducing the morphine entirely by suggestion, still allowing him to use the syringe himself, reporting to me every second day. When reduced to one grain a day, I gave him the morphine that he was to

use each day in solution, assuring him that he would soon be safely free from his bondage without the least suffering.

At the end of six days he had for *three days* been taking only pure water made slightly bitter with strychnine. He had a great dread of the sudden removal of the morphine, and when informed that he was now entirely free from his relentless enemy, and had not even had a particle of morphine in his possession for three days, he nearly fainted with surprise and delight.

The whole treatment lasted six weeks.

During the last half of the time, in addition to suggestion regarding his disease, I was also suggesting ambition and higher ideals regarding his profession and his own position in it, that he was capable of better things, and would rise to the attainment of them. To-day he is playing here in this city in a first-rate company, and in a much higher grade of dramatic work than that in which he had formerly been engaged.

Regarding my fourth division—the educational uses of hypnotism—I would say that an article was published in *Pediatrics* for February, 1897, in which a series of cases was given, illustrating these uses, in both intellectual and moral education. Reprints of the article have been made, which some of you have probably received, and I should be pleased to send them to any or all who desire it and will send me their names and addresses. I will add a single example here.

CASE VIII.—M. V., a boy nine years of age. Father a criminal with a State-prison record. Mother an upright, mild, intelligent woman. The boy has a bad face when in repose, but better when animated or smiling. His head was markedly unsymmetrical in infancy and early childhood. Left ear deformed. Sense of right and wrong decidedly dull; intellect good. He was disobedient, rough, uncouth; coarse in speech, violent in temper, and regardless of consequences when angry; cruel to playmates, pulling their hair, pinching and striking them. His mother and grandmother, with whom he lived, could do nothing with him, nor could any one else; and seeing these characteristics, his mother became most anxious concerning his future. I attempted to hypnotize him at my office more than a year ago, but he was violent and noisy in his resistance, and it was impossible to secure his attention. For a whole year afterward he would not come into my house, but always ran away as soon as he was brought to the door. At last, three months ago, things became so bad, he was so perfectly unmanageable, and his temper so outrageous, that his mother begged me to come to the house and see if I could do anything with him.

Having secured *carte blanche* for whatever course I chose to pursue with him, I went. He was in the back room, his grandmother urging him forward toward the front, he kicking and resisting. Without speaking, I went directly to him, seized him firmly by one wrist, and brought him topsy-turvy through two intervening rooms, gave him a thorough shaking, and sat him down violently in a chair. He smoothed down his bang, whimpered a little, and gruffly remarked that I had ruffled his hair. I told him I had not intended to disturb his hair, but as he had never obeyed anybody I had come to the house for the express purpose of making him obey me, and I should most certainly do it. After a few moments I said, quietly, "Now go and lie

down on the bed in the next room." He started, walking toward the bed, but when near it he set off on a full run past it and into the back room. I brought him back in no gentle manner, and again ordered him to lie down on the bed. He went toward it as if to obey, but suddenly sprang under it, and clung to the slats underneath with hands and feet and hung there like a monkey. I turned up the mattress, dislodged him by main force, pulled him out, gave him a lively spanking, and surprised him by tossing him vigorously upon the bed, with the command to lie there quietly until I gave him permission to move. He obeyed. Presently I ordered him to go into the front room and sit down again in the chair he had before occupied. Again he quietly obeyed. I said: "All right; now you understand you will obey me. I don't want to hurt you. I want to be a good friend to you, only you must obey me."

I then in a pleasant way gave him a short lesson, picturing to him very plainly the course of a boy such as he was, and where it would be likely to end; and also showing what he might be if he would change his course. I told him I should be at the house again in a day or two and I should expect him to meet me pleasantly, shake hands with me, and do whatever I directed him.

The next day there came a telephone message begging me to come up, M. was outrageous again. I went. He was backward in greeting me, but at length came and shook hands. I afterward learned that there had not been the slightest improvement in his behavior, and the cause of his mother's sending for me was his outrageous conduct at the table, when, in a fit of anger, he had thrown a plate at his grandmother. I talked to him pleasantly a moment, and then said very quietly, "Now go and lie down on the bed." He did so at once. I sat down beside him, and taking his two thumbs firmly in my hands I said: "Now, M., I want you to look steadily at that little stud in my shirt-front; keep your eyes very steadily fixed upon it." He did so, and I never secured better or more concentrated attention from any patient.

In five or six minutes his eyelids quivered and soon drooped. I closed them, suggesting sleep; and directly he was in the sound hypnotic sleep. I then presented the two pictures again, the bad course and the good course, and suggested that they would always be present, distinct in his mind, that he would dislike the *wrong* course and desire to avoid it, and choose the *good* one. I suggested definitely that he would be kind and considerate of his mother, and obey her as well as me. I repeated these suggestions very positively, let him sleep ten minutes, and repeated them again, and then awoke him by counting.

The effect of this treatment was very marked, his whole manner at home was changed, and he became comparatively docile and manageable.

He came to my office for his next treatment, which was perfectly successful. I have given him in all six treatments, and the improvement has been maintained and increased. He is not yet by any means perfect, but his general behavior is changed, and I am sure that such definite improvements in his conduct, and in making such pictures upon his mind, as I think will help to develop his better nature and qualities. He is a lover of flowers, and on two occasions has brought some of his own choosing to me. He has lost none of his shyness; he is full of life; is mischievous, playful, and even upon his mother; but he is affectionate and generally obedient, though the strap is occasionally exhib-

ited as a reminder. His will is not broken, but he has self-control, and he is far more considerate of others than formerly. In short, he is a fair example of one of the educational uses of hypnotism and suggestion.

I have to apologize for detaining you with the description of my first serious interview with this boy, but I wished to show you just what sort of a case I had to deal with. It was necessary to secure obedience before I could secure attention, and attention is necessary in most cases in order to secure the proper subjective conditions.

If this imperfect description of a few cases which have come under my own observation has served to render more definite your views concerning the varied uses of hypnotism and suggestion, and to increase your respect for a greatly misunderstood but in clean and competent hands most effective and elevating agent, my desire will have been fulfilled.

PRACTICAL POINTS IN PERCENTAGE FEEDING.*

By WILLIAM L. BANER, M. D.

At a recent session meeting of the academy a well-known pædiatrist ventured the opinion that it would be a decade before percentage feeding was generally adopted by the profession. This remark was accompanied by a glowing tribute to the great value which percentage methods had been to himself. While this view of the case seems decidedly pessimistic, there can be no doubt, as was stated in a paper read by me before this society last year, that percentage feeding is not receiving due recognition from the profession in general. This is owing in part to its friends who have burdened the subject with mathematical niceties which complicate without giving increased accuracy; and in part to the general disinclination of physicians to venture into anything which at all savors of mathematics.

In considering this matter, it seems to be forgotten that these are the same old mixtures—except that something definite is known about them. Every percentage mixture produced in the laboratory by design has undoubtedly been previously produced by accident in some tenement kitchen. The gist of percentage feeding is simply the connecting link which it gives between the baby's bottle and the physician's mind. The evident value of the percentage method and the equally evident fact that a large majority of bottle babies would continue for some time to have their bottles filled in the kitchen and not the laboratory, present themselves in my paper on the Home Method of Preparation of a Method for connecting percentage feeding with home nursing.

Several methods had been previously proposed, each based on some particular sort of milk analysis. The

* Read before the Society of the American Academy of Pediatrics, October 13, 1898.

analyses made by different chemists have, of course, shown slight variations, due to the varying personal equations of both chemists and cows. A careful examination of the subject, however, shows that the considerations of these small differences adds absolutely nothing to the accuracy of results, but does materially complicate what should be a simple and easily understood matter. The method proposed in my paper was based upon very simple whole numbers, which a review of the standard analyses showed to be a fair working average. The reception of this paper, which appeared in the *New York Medical Journal*, March 12, 1898, has been very gratifying from the fact that a number of well-known paediatrists in different parts of the country have been kind enough to express their commendation, and from the fact that the equations proposed are being taught to classes in several different medical colleges. A few adherents of more complicated procedures have insisted on the theoretically greater accuracy of using certain fractions. The answer to this criticism is, however, that with far simpler calculation the end results are practically identical with their own. Moreover, among those who insist on fractional niceties, there are, unfortunately, some whose methods actually show very considerable errors in the fundamental principles.

An instance of this has recently appeared in the *Boston Medical and Surgical Journal* for September 22, 1898, in a paper of Dr. J. L. Morse, who is connected with the Harvard Medical School. The method of calculation proposed by Dr. Morse is based on the idea that if a given quantity of milk containing four per cent. of fat is set for six hours all the fat will rise to the top quarter, which will then be ten per cent. cream, the under three quarters being a convenient solution of proteids and sugar, without any fat to disturb the calculation. This is the same mistake made by Dr. Rotch in his *Paediatrics*, and it is the cause of the inaccuracy of his formulæ for home use. This error has been pointed out more than once, and it is unfortunate that it should be again promulgated, as the simplest calculation shows that this under milk actually contains *two per cent.* of fat, and not *two tenths per cent.*, as stated. With an error of two per cent. in the constants added to the usual fractions to confuse the general practitioner, it need not be wondered at if he shies a little at the whole percentage plan.

In the paper read by me last year the requisite amounts of cream, milk, sugar, and water for giving desired percentage mixtures were expressed in equations or working formulæ without explanation of how these formulæ were derived. The very considerable number of inquiries received would indicate that many methods, many fractions, and a few widely disseminated errors have so befuddled this entirely simple subject that some statement of elementary principles would not have been amiss—and this fact must serve as my excuse for doing so now.

In thinking of percentage mixtures it is necessary to have in mind some simple standard of average good cow's milk. An examination of the various recognized analyses shows that the number *four* will fairly represent the percentage of each of the three constituents of milk with which we have to deal. This is not quite exact as regards sugar, which somewhat exceeds four per cent., but it is decidedly easier to allow for this difference when we come to actually put the sugar into the bottle, than to carry fractions through the entire calculation. With unusually rich milk, too, some allowance may perhaps be made for the extra fat; but this is so rare as to scarcely need mentioning.

Milk, then, is water holding in solution or suspension four per cent. of proteids, four per cent. of fat, and a little over four per cent. of sugar. Cream is simply whole milk into which a certain amount of *extra fat* has risen.

Thus, ordinary sixteen-per-cent. gravity cream is whole milk plus twelve per cent. of extra fat, etc., the *extra fat* in any cream being four per cent. less than the total fat content. The general principle upon which percentage mixtures are figured is simply this: As milk and cream contain practically equal proteids, it is the *quantity* introduced into the mixture which establishes the proteid percentage, and the *quality* which establishes the fat. For example, a mixture of one part milk and three parts water gives one per cent. of proteids. One part of sixteen-per-cent. (ordinary skimmed) cream and three parts of water gives also one per cent. of proteids, but in the former mixture there will be one per cent. of fat and in the latter four per cent. By using part milk and part cream and varying the proportions of each it is evident that any intermediate fat percentage can be obtained without changing the one-per-cent. proteids. Knowing that a fourth of any mixture must be milk, or cream, or mixed milk and cream to give one per cent. proteids, it is easy to figure the amount necessary for any percentage by multiplying. Thus, ten ounces of mixed milk and cream and thirty ounces of water will give forty ounces of a mixture containing one per cent. proteids. If we want one and a half per cent. proteids the mixed milk and cream must be raised to fifteen ounces, etc.—that is, we multiply one fourth the total quantity of mixture desired by the desired proteid percentage. Knowing the requisite amount, Shall it be all milk, all cream, or mixed milk and cream? If it is desired to make the proteid and fat percentages equal it is evident that milk alone is necessary. If, as is usually the case, it is desired that the fat shall exceed the proteids, a certain amount of cream must be used, the amount depending on the "extra fat" contained in the cream which happens to be available—for instance, with sixteen per cent. cream for every unit of percentage that we want the fat to exceed the proteids we must use cream to the extent of one twelfth of the entire mixture. Or, stated as a general rule (for any richness of cream),

the amount of cream will be: Quantity of mixture divided by the "extra fat" in the cream to be used, and multiplied by the difference between desired fat and proteid percentages. We now have a mixture of milk, cream, and water having the desired proteid and fat percentages, and having a sugar percentage which is practically the same as the proteid percentage. It is only necessary to add enough dry milk sugar to bring to the desired percentage. For instance, suppose our mixture of milk, cream, and water has been so made as to contain two per cent. of proteids and we want it to contain six per cent. of sugar, we must add four per cent. of dry sugar—that is, we find the necessary amount of sugar by multiplying the total quantity of mixture by the difference between the desired sugar percentage and the desired proteid percentage, and divide by one hundred. We may now use slightly less sugar than the calculation calls for (generally by knocking off small fractions), in order to allow for the fact that milk and cream contain a trifle over four per cent. of sugar.

If these simple principles have not been complicated in the telling, it is evident that pencil and paper are not needed for calculating percentage mixtures with considerable accuracy.

Being called upon to prescribe nourishment for an infant defrauded of its natural supply, and it being desired, for economic or other reasons, to mix the food at home, the question of definite milks comes at once to the fore. The laboratories furnish good clean milk containing four per cent. and creams containing eight, twelve, and higher percentages of fat. These creams are very desirable, but the expense is not inconsiderable, and, in fact, unless some care is exercised, may fully equal that of using the laboratory mixtures. If these creams are not available recourse must generally be had to the ordinary commercial creams or to the creams obtained by letting a bottle of good milk stand for a certain length of time. In this way we can obtain fairly accurate creams of eight, ten, twelve, and sixteen per cent. of fat, depending on the length of time allowed to stand.

If fresh average milk be set in ice water for four hours the top third will be eight per cent. cream. In six hours the top quarter will be ten per cent. cream, while the top fifth will probably average twelve per cent. If milk is set for twelve hours or longer the cream layer will contain sixteen per cent. fat. A very good and, considering its advantages, not expensive procedure is to use in this way the laboratory milk, which is definite four per cent. milk and free from pathogenic bacteria.

In making home mixtures we should always, when possible, use the lowest cream which will give the desired fat percentage. In very many cases the fat and proteid percentages which we desire our mixture to contain will bear the ratio to each other of two to one, two and a half to one, three to one, four to one, etc. Such mixtures can be readily made by simple com-

binations of eight, ten, twelve, or sixteen per cent. cream with water and without using any milk—simply carrying Dr. Meigs's mixture a step further and adapting it to the percentage idea.

It is evident that the calculating of such mixtures is simplicity itself by the principles above stated. If, for instance, we desire sixteen ounces of a mixture containing four per cent. fat and two per cent. proteids the simplest and best way of getting it will be to use eight ounces of eight-per-cent. cream and eight ounces of water, but in case other creams are more available we must remember that we are by no means tied down to the use of eight per cent. cream. We can produce the same formula with mixtures of whole milk and centrifugal cream with water or whole milk and skimmed cream with water, the proportions being quickly calculated. The reason for using the lightest possible cream is simply in order that as little disturbance as possible of the emulsion may take place. It is for this reason that some pediatricists prefer the mixtures made of whole milk, cream, and water to those made by the laboratory method, where under milk is used, necessitating heavier cream. Several physicians have written me that they considered the former mixtures actually to have a higher nutritive value.

If this shall prove to be the case, the laboratories can, of course, be depended upon to make the necessary changes in method. It would be rather hard on them, however, from an economic standpoint, to abandon the use of skimmed milk in their mixtures in a town where it is against the law to sell that useful article. At the present time, however, this entire subject of emulsion disturbance is still in its infancy.

72 WEST FORTY-FIFTH STREET.

THE DIAGNOSIS OF OBSCURE CASES, AND THE TREATMENT OF ALL CASES OF TYPHOID FEVER.*

By JAMES T. WHITTAKER, M.D.

CINCINNATI

REPORTED BY S. MALSHARY

From the history which you have just heard you will have no difficulty in making a diagnosis of typhoid fever in the case of this young woman. Indeed, the physiognomy is so distinctive as to suggest at once the nature of the disease. You may see the dullness and hebetude depicted in the expression, and the general prostration is as evident as the pallor of the face. This is the age of predilection of typhoid fever, just previous to full maturity. There was a feeling of depression, weakness, and discomfort. That is all, of course, but, as this term is too general, the condition is best expressed in the French word *malaise*. There was no sleep for a week or

* A lecture delivered at the Great Samaritan Hospital Clinic, Cincinnati, October 25, 1898.

two, a disinclination to effort or to work; with it all a loss of appetite, headache, confusion of ideas, some pain in the bowels, and diarrhœa. At last the patient was totally incapacitated for work, was unable to be on her feet any longer, and was thus brought to the hospital and put to bed. The examining physician discovered at once that there was fever, the temperature ranging from 100° to 102° F., that there was some slight meteorism, with enlargement of the spleen, and you may yourself see the rose-colored lenticular spots, which were first pointed out by Louis considerably over half a century ago as characteristic of this disease.

So the typhoid state—that is, the smoke about the brain, the continuous fever, the abdominal signs, the enlargement of the spleen, and the eruption, all of which we recognize readily in this case, constitute the typical picture of a typhoid fever.

The majority of cases which you see will show all of these signs if you look for them carefully enough and at the right time. The hebetude and depression of spirits belong among the prodromes, the headache and fever show themselves from the start, the enlargement of the spleen develops in the course of a few days, the abdominal symptoms, including the diarrhœa (constipation as an exception), in the course of the first week, the eruption from the tenth to the fourteenth day disappearing, as a rule, by the beginning of the third week.

But you may readily understand that you might be called to see the case in its earliest stages or days, or in its later history, when some of these signs were absent. Then there are always only too many cases which run an irregular or atypical course. These are the cases which most embarrass the practitioner.

Typhoid fever is oftentimes masked under the picture of a meningitis, pneumonia, tuberculosis, and sepsis. Typhoid fever may itself produce any of these conditions, so that they may be merely symptoms of this disease, and then, as is well known, any disease may assume a so-called typhoid type and thus confuse the diagnosis.

As to malarial disease, which was always formerly the most confusing, there is now much less difficulty in distinguishing this affection.

The most valuable contributions in medicine are those which enable us to earlier diagnosticate a disease. Two such contributions have recently been made to the diagnosis of typhoid fever. One is the so-called diazo reaction and the other the Widal blood test. Either of these test is as valuable as any of those which have been mentioned, and one of them, the blood test, is of more value than any of the rest.

The Diazo Reaction. The diazo reaction is inseparably connected with the name of Ehrlich, who has made so many contributions to the recognition of disease by color tests, and especially to the early diagnosis of tuberculosis. The diazo reaction in it causes a peculiar color which is imparted to the urine by the addition of certain reagents. It is a test of execution, so

simple, and so valuable that it should never be omitted in the study of a case of fever in which there is the least doubt as to the diagnosis. At any distance from a bacteriological laboratory the blood test is impracticable, but the study of the diazo reaction is as easy as the test for albumin in nephritis. It can be made in less than two minutes. The reagents will keep for many months, so that the test is in every way perfectly practicable.

The diazo reaction requires for its execution a small graduated glass which measures three cubic centimetres (a scanty drachm of our measure), an ounce of sodium nitrite (one-half-per-cent. solution), and a preparation of sulphanil acid, which is made as follows: To water, one thousand cubic centimetres, add HCl fifty cubic centimetres, and thereupon sulphanil acid to saturation; finally a bottle of aqua ammonia.

The test is done as follows: To three cubic centimetres of urine add one drop of the sodium-nitrite solution, and shake the glass to incorporate it; thereupon three cubic centimetres of the sulphanil-acid solution, and shake the mixture. Now pour in an excess of ammonia, not drop by drop; shake again. Hereupon a reaction shows itself at once, which, if positive, consists in a rose-red or dark-red color. A negative reaction shows a brownish or yellow color. The reaction is almost instantaneous, and the color is distinctive. You may, if you choose, and it is a wise precaution to take at first, test a specimen of normal urine at the same time that you may have the contrast of color. But if once you see this rose-red hue you will not need to take this precaution again.

I am having carried in now this little boy nine years old who was brought to the hospital ten days ago to be operated upon for appendicitis. When he came to the house he lay upon his back with his leg drawn up, and there was a tumor to be felt in the right iliac fossa. The surgeons did not like to do the operation at his home, on account of the surroundings—a remarkable restraint for surgeons to exercise in facing this diagnosis—so they brought the child here. It did look like a case of appendicitis, but, as the whole abdomen was somewhat tumid, the spleen apparently enlarged—a fact difficult to determine exactly—we concluded to test the urine before going any further. Here is the test. Observe now how the amber-colored urine is transformed to a deep rose-red by the final addition of ammonia. This reaction does not occur in appendicitis. But to make the assurance doubly sure, we also tried the blood test, and got here, too, a positive reaction. The boy is now rapidly recovering from typhoid fever. He would have probably recovered from an operation for appendicitis, and the case would have gone on record as swelling some surgeon's statistics of successful results in the acute stage.

The diazo reaction has now received so much consideration as to have had its value definitely established. Thus Krakiewicz made 16,367 tests in 1,105 different cases, finding the diazo reaction in every case of military tuberculosis. In ordinary pulmonary tuberculosis it

has prognostic as well as diagnostic value, as it is present only in those cases which run a rapidly fatal course. Any complications with nephritis, however, excludes it, as the test is found negative in these cases. In typhoid fever it is apt to be absent in the last stages, but it is found in the first and second stages, even in the mildest cases. A return after disappearance indicates a relapse. The patient can not, therefore, be considered convalescent so long as the diazo reaction shows itself.

The beauty of the diazo reaction consists in the fact that it is nearly always positive in typhoid and typhus fevers. In typhoid fever it is nearly constantly present from the middle of the first week on. You may therefore be misled by making an examination a little too soon. If so, you must repeat it later. The reaction disappears, as a rule, about the time of the first break in the fever—that is, about the twenty-first or twenty-second day. We say that it lasts, as a rule, from the fifth to the twenty-second day, and this is exactly the period when we are called to make the diagnosis in the great majority of cases.

The diazo reaction shows itself, however, also in other diseases. Thus in measles, which it distinguishes in this way from scarlet fever; in tuberculous meningitis, which it distinguishes in this way from the simple form. Now, as a rule, there is not much difficulty in differentiating measles by its coryza, and tubercular meningitis by its long prodromes, bronchial catarrh, intestinal catarrh, lymphadenitis, etc. Then, too, these diseases which might confuse us rarely come into consideration. The rose-red color is absent in simple meningitis and in all kinds of rheumatic affections which might simulate typhoid fever. It is also absent in pneumonia and diphtheria. It is absent also in sepsis, unless the sepsis depends on or is a symptom of typhoid fever. Of this we will speak again.

Unfortunately, the diazo reaction is sometimes absent in typhoid fever, so that while a positive reaction will diagnosticate the disease, a negative reaction will not exclude it. Thus, as before stated, it is absent in the first and the last days of the disease. In some cases it begins to disappear as early as the second week and sometimes as early as the tenth day. Thus, as you see now, we fail to get a typical diazo reaction in this typical case of typhoid fever, which is now at the end of the second or the beginning of the third week. This is, therefore, one of the cases in which the diazo reaction absent itself early in the history of the disease. But it is not impossible that we are further along here than we think.

The diazo reaction is sometimes absent also in typical cases of typhoid fever even when it ought to be present, but such an absence pretty much always indicates a complication. Sometimes after it has disappeared for a time it reappears, and such a reappearance is valuable as indicating a probable relapse of typhoid fever. One point of especial value is that medication has no influence upon it.

I had a man here in the hospital last year who came in with a diagnosis of meningitis. His mind was hazy all the time, he was delirious most of the time, and the disease was protracted far beyond the history of any ordinary typhoid fever—in fact, in the sixth and seventh week. There were no abdominal symptoms, save some dysenteric phenomena; there was no eruption and no enlargement of the spleen. The patient was undergoing a slow marasmus from inanition. The relatives called a consultation with a specialist in neuropathic diseases, Dr. Hoppe, of this city. Under thorough examination of the case he had to admit with me that the diagnosis lay between typhoid fever and meningitis. We now made the diazo-reaction test, and got a perfect reaction, prolonged thus far beyond the natural duration of it. This reaction was the more valuable because the blood test was imperfect. We felt ourselves justified, with this additional corroborative sign, in making a diagnosis of typhoid fever, and the clearing up of all the symptoms in the course of another week seemed to justify this opinion. A tuberculous meningitis would not have disappeared in this way.

The diazo reaction is thus valuable as occurring in the majority of cases of typhoid fever in certain periods in the course of the disease. It is sometimes absent even at this time, and is, I repeat, absent, as a rule, at the beginning and end of the disease. The diazo reaction is not therefore pathognomonic.

What is this diazo reaction? While the exact nature of the reaction is unknown, it is supposed to depend on the decomposition of certain albuminoid bodies, one product of which, chemogen, is considered to be the distinct cause. Now this chemogen also occurs in other diseases, and especially in pulmonary tuberculosis, so that where it is impossible to make this differentiation by other signs of either typhoid fever or tuberculosis, it is necessary to turn to the consideration of another test—to wit, the blood test, the so-called Widal reaction.

The Serum Test.—The attempt to diagnosticate typhoid fever by the disclosure of the typhoid bacillus is difficult and impracticable, if only for the reason that it requires a special bacteriologist to make it. But the Widal reaction demands no particular skill. This reaction consists in the immobilization and agglutination of the typhoid bacilli in a recent culture when brought in contact with the blood of a patient affected with typhoid fever. Widal made his first contribution as long ago as 1896. Antisera in this reaction, which led up to it, had been made several years before, but Widal made the subject thoroughly practicable with the discovery that experiments with dried blood show all the characteristic properties. We make our tests here altogether with dried blood and recent cultures, and Dr. Malbury, who has devoted a good deal of time to this subject, will proceed to make these examinations before you. We take the blood by puncture from the heel of the finger, streak it on a slide with a sterilized water

and then with alcohol, upon a clean glass slide, which it is not necessary to sterilize. A minute amount of the typhoid culture is taken from the test tube and is diluted with a drop of distilled water. This culture is twenty-fours old, which is about the best age. The blood if dry is moistened with a drop of distilled water, and of this mixture a minute fragment of a drop, not enough to cause coloring, is added to a drop of the emulsion or dilution of the typhoid-bacillus culture. The arrest of movement of the tubercle bacilli and the agglutination into clumps become apparent in the course of a few minutes, sometimes earlier, sometimes later. Any agglutination which occurs as late as two hours is accepted as decisive. The rapidity of arrest of movement and agglutination is not determined by the gravity of the diseases, so that the test has value only from a diagnostic standpoint, but it has extreme value in this way, because it is a specific arrest, for, as you might imagine, the arrest of the typhoid bacillus can not be brought about with healthy blood or with the blood of other diseases. Of the two factors, the immobilization is of more value than the agglutination, for agglutination does sometimes occur from other cause. The blood test shows itself early, usually by the end of the first week, and persists throughout the course of the disease, and sometimes for many months and even years afterward. In fact, the condition sometimes persists for life; at least it has been recognized as long as thirty years. This fact interferes to some degree with the value of the test, for it is necessary to know whether the patient will have had typhoid fever in the previous history. On the other hand, a clear history of an attack of typhoid fever almost necessarily excludes a repetition of the disease.

In making the blood test it is necessary to use diluted solutions. Any agglutination or even an immobilization which should take place in a concentrated solution would not necessarily indicate typhoid fever, but a change in a dilution of one to twenty or one to forty is almost pathognomonic.

In our case, as you will see by examining the specimen, the arrest of movement and agglutination are both distinctly pronounced.

Of the two tests the blood test is by far the more valuable; it is, in fact, practised with precision, almost pathognomonic. But the test, for some unknown reason, sometimes fails even in genuine cases of typhoid fever. Eshner has recently recorded a case in which the blood test showed itself distinctly in the relapse, but was wanting in a primary attack. Of course, one may always entertain a doubt whether the attack in which the blood test was absent was really typhoid or some simulating disease. Here we may have the diagnosis cleared up by the use of the other test, the diazo reaction, or in an extremely doubtful case or set of cases, by the discovery of the typhoid bacilli in the stools. Thus one test may correct the faults or substitute the defects of the other.

I have at the present time under treatment a young lady whose symptoms bear the aspect of dysentery. She has tormina and tenesmus with bloody stools. There is a temperature every evening ranging about 100° F. There is no enlargement of the spleen that I can detect and no roseola, though the disease is believed to be at the end of the second week. The diazo reaction is imperfect, but the blood test is positive. This young lady reached home two weeks ago from the East, taking her meals on the train. She was accompanied by a nephew, a boy aged four, whom I had treated for exactly the same symptoms, considering the case to be a dysentery. The boy had about recovered when the young lady was taken ill. I was still inclined to consider the case of the young lady as dysentery, when I heard that a third party, a child on the same train, in previous perfect health, attacked at the same time, was now lying ill with unmistakable symptoms of typhoid fever. Whether one might be willing to make an absolute diagnosis of typhoid fever in the case of the young lady or not, it would at least be necessary to adopt the precautions pertaining to that disease, which would extend over a longer time than the treatment of a simple dysentery. Typhoid fever does begin sometimes as a dysentery.

One is not justified in our day under any circumstances in puncturing the spleen to get the typhoid bacillus, as a fatal accident has already occurred from the rupture initiated by this minute puncture in a spleen rendered so soft and friable as to be almost brought to a pulp by the lesions of typhoid fever.

Stewart got the reaction in 1,000 cases of suspected typhoid fever, using in every case dried blood. The diagnosis had been established clinically 538 times. In 969 cases the Widal reaction corresponded with the clinical results. In three of the thirty-one cases the reaction was positive, while clinically the diagnosis was not made; on the other hand, the reaction failed in twenty-eight cases in which the clinical diagnosis had been established. The reaction failed in ten cases in hospital and twenty-one cases in private practice. The agglutination of the blood was observed five, eight, and in one case ten years after the typhoid fever. W. C. Brown called attention to the difficulty of making the diagnosis in the tropics because of the confusion with malaria, which in this region shows similar symptoms.

The demonstration of the plasmodium by no means indicates that the symptoms present depend upon malarial infection, for the sporozoa of malaria are found often in the blood of patients who feel perfectly well, while but few parasites are detected in those who are gravely ill. Brown used the Widal serum reaction in more than a hundred doubtful cases at Penang. It was only in two cases that the further course of the disease failed to support the serum diagnosis. In all the other cases it was perfect. The serum reaction repeatedly furnished essential service in early diagnosis. Brown ob-

serves that if the drop of serum bouillon, in which agglutination had taken place, was allowed to become dry, and then water was added anew, the heaps dissolve themselves and the bacilli again become mobile. It was seen from this observation that the bacilli do not stick firmly together. An addition now of new serum renders them immobile and again agglutinates the bacilli.

With the use of these two tests we may pretty much control the situation, and there is no longer much room for doubt in a diagnosis of even obscure and irregular cases of typhoid fever. We may now understand certain cases in this way in which the abdominal or local symptoms are insignificant or slight, the cases of so-called "typhoid sepsis."

Typhoid Sepsis.—A good illustration of these atypical cases was furnished in the reports of Chiari and Krauss in the recognition of septicaemia, not of typhoid type, but of typhoid origin. These authors published nineteen cases, which all came to autopsy under Chiari in the Pathological Anatomical Institution at Prague. Of these cases, seventeen had been diagnosticated as typhoid, and two had been shown to be typhoid on autopsy. Of these cases there were four groups. The first two groups showed nine anatomically typical cases and two anatomically atypical cases, both of which were, however, still recognizable. The third group was most important. It included five cases in which it was impossible to demonstrate the exact character of the disease on autopsy, and it was only by the use of the serum test that the clinical diagnosis received its confirmation. The bacteriological investigation showed in all five cases the presence of the typhoid bacilli in different organs, the gall bladder, mesenteric glands, spleen, kidneys, and urine. These cases show that infection with typhoid fever may occur without any definite localization, so that a pure typhoid septicaemia is not infrequent.

There was a case published in connection with these which could be demonstrated as typhoid neither microscopically nor bacteriologically, nevertheless the serum test made in life and on the dead body proved the diagnosis. There had been a number of typhoid affections in the same family.

The fourth group in which the diagnosis of chronic tuberculosis had been made clinically and had been demonstrated upon autopsy, nevertheless gave a positive serum test of typhoid fever. Now, although the bacteriological examination turned out negative in these cases, it was concluded that the patients had suffered from typhoid infection in their previous history.

The later observations which would go to deny the specific importance of the serum test, especially those cases in which bacteriological examinations had been made post-mortem, seemed to be without force. It is recommended in these obscure cases to examine the gall bladder for typhoid bacilli, as many years' experience with a large amount of material has shown that if there is any typhoid infection in the body we are nearly always

able to cultivate typhoid bacilli from the gall bladder. On the other hand, there is no single case in which the pathologist has been able to cultivate typhoid bacilli from the gall bladder where the serum test turned out negative.

Typhoid fever has, of course, many complications, and among others there may be complications with mixed infection. Thus Ohlmacher reports two cases marked by hemorrhagic and purulent meningitis, both fatal. The typhoid bacillus was found pure in the diseased parts of the brain. In another case by the same author, a case of typhoid fever was attended by secondary streptococcus infection of the meninges. In this case the typhoid bacillus was found pure in the spleen and mesenteric glands, but cultures from the diseased parts of the brain and from the blood of the heart furnished both streptococci and typhoid bacilli.

In all these cases the diagnosis may be made in life in the absence always of previous infection with typhoid fever.

Treatment.—Now a word only as to the treatment of this case. The patient is doing well under a milk diet and an occasional dose (five or six grains) of lactophenin when the temperature reaches 101° F. We find that the comfort of the patient is much increased under the use of this remedy or of phenacetine. The mind is less confused, the sleep is less disturbed, the state of vigil is lessened also. We have no complications to combat thus far. Should the temperature reach 102° F. in the rectum we should immediately give the patient a cold bath. Where this precaution is adopted from the start we lose no cases of typhoid fever, barring the accidents of perforation and profuse hemorrhage. We adhere, in theory at least, to the Brand method, and bring down the temperature with cold baths at 68° to 70° F. All patients feel the benefit of this treatment, as a rule, and it is only in the exceptional case that one complains of it. The cold bath strengthens the heart and drives out the typhotoxine through the kidneys. Until we may discover some antitoxine, there is no real substitute for the cold bath. We could really ask nothing better if it could be adopted rigidly and from the start. If the patient goes to bed at once to economize the strength and receives the cold bath systematically, the mortality is reduced from fourteen to seven per cent., and the liability to both hemorrhage and perforation from three or five per cent. to one per cent. and a half or three per cent. But a good deal depends upon the time when the treatment is instituted. Thus, of thirty-two cases treated before the fifth day there was a loss of but one—that is, 3.1 per cent.; of twenty-eight cases treated before the tenth day there was a loss of six—that is, 21.4 per cent.; while of eleven cases which did not receive the treatment until after the tenth day there was a loss of four—that is, twenty-two per cent. I am quoting statistics now from a perfectly reliable source, though I forget the source. A cold or treatment late for such results.

But it is not always practicable to give the cold bath—that is, there are cases in which the patient, or more especially the friends, absolutely refuse the bath. Now here, of course, much will depend upon the convictions of the physician. He may nevertheless insist upon it and have it done, or he may compromise, and have it done imperfectly, or he may compromise still further, and give a cold sponging or use instead the modern antipyretics. These things are, therefore, all compromises. And like all compromises, they fail to furnish ideal results—that is, they fail to save some individual which would have been saved by the cold bath. I say nothing of the so-called abortive treatment, which can be of no value after the first week. We do give our patients a dose or two of calomel, and sometimes follow up the treatment with salol or naphthol when the discharges seem to be offensive. But we do not expect to accomplish anything curative in the sense of abortive in this way, because the micro-organisms which produce the disease have long since entered the blood, become colonized in the mesenteric glands, and especially in the gall bladder, where they develop their various toxins far out of the reach of any intestinal antiseptics. A medical friend of mine said to me on the street to-day: "There is a growing tendency to abstain from cold baths." Certainly there is. These tendencies are always present. The *laissez aller* is always easier than the *laissez faire*. The question of the treatment of typhoid fever resolves itself with many other questions into the right and the expedient. The right treatment insists upon the use of cold baths; the expedient substitutes them. This treatment reaches deeper than typhoid fever. It is a matter of the construction of individuals who practise medicine. I would say, were it not for fear of misconstruction, it is a question of character.

SPONTANEOUS ABSORPTION OF SENILE CATARACT, WITH RESTORATION OF VISION.

DISLOCATION OF NUCLEUS AND CAPSULE INTO THE ANTERIOR CHAMBER.

By F. W. MARLOW, M. D., M. R. C. S. E.,

SYRACUSE, N. Y.

Mrs. L. Irish, was operated upon by me ten years ago for cataract. She was at that time about seventy years old. Her left eye had been failing for twenty months, and her right for ten. The cataract in the former was quite ripe, in the latter still immature. The former only was operated upon, the resulting V. being $\frac{6}{8}$ partly.

Getting on well with one eye, she has never consented to operation on the second.

On account of some diminution of vision in the left eye she consulted me on November 18, 1898. I then observed that the pupil of the right eye was black. Closer inspection showed the small, brownish yellow cell nucleus lying in the lower part of the anterior chamber, half

concealed by the limbus and broad arcus senilis. Its edge was indented, and from each margin folds of what appeared to be the capsule of the lens passed upward, converging to a point in the anterior chamber almost level with the upper margin of the pupil. This membrane was for the most part transparent, its limits being very sharply defined, and dotted with minute opaque white spots.

The fundus could be seen without much difficulty, the only deviation from the normal noted being an atrophy of the chorioid immediately around the optic disc.

The pupil was five millimetres wide and showed no reaction whatever to light and convergence. The iris was tremulous. The pupil of the left eye responded moderately but promptly to these stimuli.

V. of R., with \pm 10 D. sph., is $\frac{3}{8}$.

V. of L., with corrections, was still $\frac{6}{8}$ partly, in spite of the presence in the pupil of a thin, tense membrane.

Although no history of injury could be obtained, the dilated and immobile conditions of the pupil, together with the condition of the lens, is suggestive of traumatism.

As has been pointed out by Pagenstecher and others, and confirmed by Priestley Smith during his investigations on the growth of the crystalline lens, the attachment of the lens to its suspensory ligament, and especially of its posterior surface to the hyaloid membrane of the vitreous, is much weaker in old age than in youth.

In view of the age of the patient, the blindness of the eye, and not a very high degree of intelligence, it is possible that a traumatism sufficient to loosen the attachments of the lens capsule may have occurred, without involving enough disturbance of visual function or of the patient's comfort to make her remember it.

It is most probable that the dislocation of the over-ripe cataract into the anterior chamber preceded its absorption, although no evidence on this point was forthcoming.

In the absence of a definite history of injury the case is reported as one of spontaneous origin.

401 MONTGOMERY STREET.

SOME SUGGESTIONS ON THE TREATMENT OF PYORRHOEA ALVEOLARIS.*

By G. LENOX CURTIS, M. D.

In my remarks I shall not attempt to exhaust this subject, which is broader than the present status of knowledge. I will, however, make a few suggestions, with the view of drawing out discussion that may lead to widening this field. I shall not think it strange if some of my hearers disagree with me, for I differ somewhat with most authors upon the subject. I think that Dr. Pierce has fallen into the error made by some other writers who maintain that uric acid is the cause instead

* Read before the Alumni Association of the Boston Dental College, December 11, 1898.

of the result of rheumatism and gout, of which pyorrhœa alveolaris is a symptom, seen only in certain classes of the dyscrasia. I have found that it is not always safe to adopt some views, especially those found in some books. Not only dentists, but physicians sometimes depend too largely upon literature for their practice in most oral diseases.

Perhaps all dentists do not have facilities for thorough experimental work, but they certainly deserve credit for the persistent manner in which they have endeavored to cure, by devoting their time almost wholly to the treatment of a single symptom. I believe that very few recognize the importance of general treatment, with the view of eradicating from the system the conditions that aggravate this disagreeable and offensive malady. There are physicians—even those of prominence—who seem to fail to observe one symptom familiar to every dentist—that is, they do not appear to connect the local aspect with a systemic disorder. In both of these professions the lack of general knowledge concerning the intimacy of the systemic with the local (directly or indirectly) is something surprising. The present plan of medical teaching is far from being equal to that known to the educated dentist more familiar with oral diseases. The medical curriculum will not be effective until its students are better educated upon oral diseases. The ætiology of pyorrhœa alveolaris, or loculus alveolaris, to my mind, is best presented by Dr. Eugène S. Talbot, who attributes the principal cause to careless dentists and to the degeneracy of some of the oral tissues. The clinical features are best described by Dr. J. N. Farrar in his articles in the *Independent Practitioner*, April and September, 1886.

Among the local causes for which I believe careless dentists are responsible is the extraction of one or more teeth, leaving thereby imperfect antagonism, improper contour fillings, overlapping fillings between the teeth, ill-fitting root bands and plates, ligature, file, and emery-strip wounds; possibly too hard malleting is a factor; certainly bunglingly made regulating machines, V-shaped spaces between the teeth (whether caused by file or wedge) allow lodgment of food, salivary calculi, and cheesy deposits. Any local condition that leads to degeneracy, or any medicine that causes salivation, should not be overlooked in the diagnosis and treatment.

I regard rheumatism, gout, and syphilis as potent causes of this malady; but, of course, it does not necessarily follow that these affections always accompany pyorrhœa alveolaris. I sometimes think that physicians do not always appreciate the importance of retaining the natural teeth, or substituting artificial ones where only one or more are lost. As the treatment of local diseases more properly belongs to the dentist, and many of them do not thoroughly remove the deposits from the teeth, and a less number have a practical knowledge of the best principles in the treatment, I think moreurgi-

cal and medical education should be taught in dental colleges, and more dental education taught in medical colleges. Most dentists are general practitioners in their calling, attempting all parts, and do not follow exclusively any one branch until they find that they excel in it. Instead of advising their patients to go to a specialist for treatment of that in which they do not excel, they too often skim over that, making a feint at treating the disease, or, what is more unpardonable, adopt the "do-nothing plan," and tell their patients this trouble is incurable.

I believe pyorrhœa alveolaris can be cured. This I feel I can prove by tabulated cases. Treating this disease, while practised by dentists, belongs as much to surgery as the reduction of fractures. Of course, only the deft in skill can properly treat it. Dr. Dunlap truthfully said: "A doctor can be made in five years, but it requires twenty-five to make a first-class physician."

A clear knowledge of the condition of the patient is an important matter. The surgeon generally tries to learn this, while the dentist too often overlooks it. The restoration of the general health is essential to the cure of pyorrhœa alveolaris, but the restoration of the general health can not be accomplished so long as this particular disease exists in an aggravated form. The ordinary physicians rarely examine the mouth to ascertain whether there are sufficient teeth to masticate with, and overlook the common fact that there are often pyorrhœic pockets filled with bacteria and pus daily being mixed with the food, and continually carried into the stomach. Nearly all persons affected with this disease have dyspeptic ailments, anemia, blood poisoning; and, accompanying these, there may be various forms of neuralgia and, occasionally, mania. A physician would not expect to cure dyspepsia, or to cure phthisis, until he had first cured nasal catarrh, if present. I believe that the nails and the teeth are among the best indicators in diagnosis of rheumatism. They show certain signs long before other symptoms appear, except those found in the blood. They may be regarded as an index showing when to cease treatment for rheumatism. When the abrasions on the teeth lose their hypersensitiveness, and the nails lose their corrugations and lines, returning to their normal smoothness and flexibility, we well know that the rheumatic poisons have been eliminated. Can not the ridges so frequently found in the teeth be accounted for by prenatal influences, such as rheumatism during gestation? Why should not the teeth germ become marked as well as the nails? The hardness of enamel retains the ridges, while the nails change about every three months, and the indicator may be lost.

The examination of the blood is important in the diagnosis, as this paludum shows the presence of existing diseases. The examination of the blood is, I think, the strongest bias in diagnosis. In many diseases such evidences may, or may not, be found in the blood. These are always found before the objective or sub-

jective symptoms. They are the first to come and the last to leave. Dr. Robert L. Watkins maintains that fibrin is present in the blood in advance of the general symptoms of rheumatism, apoplexy, organic heart disease, fevers, etc., and is as variable in form as are the diseases themselves. Dr. Watkins has found in the blood of patients suffering from pyorrhoea alveolaris different varieties of fibrin, spores of syphilis, eczema, tuberculous matter, and the bacillus itself. He found these even when the diseases were not active. We may, therefore, reasonably base our hope of ascertaining the etiology of the disease by the study of the blood.

Dr. Talbot regards careless dentistry as the cause for the increase of pyorrhoea alveolaris. Dr. Beers touched the keynote when he said: "The gingival margin should not be wounded." When the gum has been wounded, the greatest care should be taken to heal the wound without infection, and especially is this true in cases of inherited tendencies. While the neurotic patient is prone to pyorrhoea alveolaris, exaggerated cases are not infrequent in the phlegmatic patient. Although no outward sign of lesion exists, it is often found that the pulps of some teeth involved are devitalized. Infected tissue from septic tooth canals is often classed as pyorrhoea alveolaris, and treated without first removing the cause, and from this the teeth are often lost. Whenever such teeth are extracted (in order to prevent the continuation of the disease) the sockets should be curetted and treated as open wounds, until filled in by granulation.

Patients naturally shrink from being hurt; but now that we can safely use a strong solution of cocaine, by first administering its antidote volasem, the treatment of pyorrhoea alveolaris is comparatively painless. I would not have it understood that I believe every tooth involved in this disease can be saved, or that an attempt should be made to save all teeth. To do the greatest amount of good, it is often necessary to make some sacrifice, but because a number of teeth are loose it does not follow that they should be extracted. The patients' wishes should be consulted, and as they look to their doctor for guidance, they are generally willing to accept his advice. I was recently asked by a dentist to see with him a case of pyorrhoea alveolaris that he had been treating for four years. He appeared satisfied with the results, for by the use of ligatures he had been able to hold in position several loose teeth; yet this was done to the detriment of those teeth to which they were fastened. The gums were hypertrophied, boggy, and purple, with evidence of calculi beneath them. Four of the teeth which had not been opened contained septic pulps.

Medical treatment for the disposition of degenerating cause should be given in conjunction with local treatment, and should be continued until the disease is eradicated, that is, the general health of the patient should receive careful attention. Septic canals should be cleaned and filled with a permanent material. He-

move all the calcareous deposits, ulcers, abscess sacs, carious bone, irritating roots, and in fact every source of irritation. The greatest care must be observed in curetting and dissecting away every particle of diseased tissue, so as to leave a fresh and healthy wound, which should be treated as such and encouraged to heal as rapidly as possible. Next, boil out all remaining debris with peroxide of hydrogen. The patient should be instructed to use a sterilizing mouth wash (electrozone is probably the best) every half hour, if possible, for twenty-four hours; then apply tincture of iodine sufficient to flood the wound around the roots. This treatment should be continued every two or three days, until the wounds are healed. Care should be observed to avoid bloodletting while treating the wound, lest it become infected.

The period of treatment is usually from one to two weeks. The fixation of teeth should be done as early as possible after the first operation by means of a splint, as devised by Dr. William L. Fish. Proper occlusion of the teeth is essential to prevent undue pressure on any one, and to facilitate mastication. Never use acids or mercury. Operate on a small part at a time. Stop treating the wound when it is healed. When the disease is so extensive that little attachment to the root remains, the pulp being vital, the extirpation of the pulp and the treatment of the canal, if septic, should be done. Instruct the patient to return when any irritation of the gum or jaws is noticed, and from every three to six months for examination. It is not always easy to fully impress upon the patient the importance of this advice. The irritant that caused the disease will reproduce it.

7 WEST FIFTY-EIGHTH STREET.

HYGIENE VERSUS DRUGS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

By CHARLES L. MINOR, M.D.,
ASHVILLE, N. C.

IN choosing the subject of my remarks I have been prompted by the conviction that, despite all that has been said in its favor, the general practitioner, and often the specialist himself, is clinging too closely in his treatment of phthisis to the use of drugs, has no real familiarity with or active faith in the possibilities of hygienic and dietetic treatment, and seems to think that they, assisted possibly by climate, can do all that is necessary; there is danger lest by his faith in medicines he ruin the stomach, the only bulwark which stands between the pulmonary invalid and destruction. This faith in drugs and disuse of hygiene, I believe arises largely from the fact that a hygienic cure, to be satisfactorily carried out, demands of the doctor far more

* Read before the Mississippi Valley Medical Association, October 11, 1895.

pains and attention, a far closer oversight of his patients and their life, than is needed when he pins his faith to a series of prescriptions, and trusts, often too fondly, to the patient's taking them as ordered. Ever since the days when our ancestors lived in primitive simplicity, there seems to have existed in human nature an unquenchable faith in the existence of specifics for each disease, a faith of which patent-medicine venders make clever, if unscrupulous, use. Just as the medicine man of the prairies seeks to drive out sickness by bideous noises or horrible odors, so we, his more civilized brothers, too often hope by pouring drugs down our patient's throat to see the malady overcome. Indeed, in this especial disease, so great has been the number of drugs used that the great Laennec,* the father of auscultation, writing in 1819, bases an argument for the incurability of phthisis on this very fact. "One can not deny," says he, "the disease to be incurable when we see in turn tried against it almost every known medicinal substance, the most divers remedies, the most opposed drugs; when we daily see new medicines proposed, and note the resurrection of measures formerly extravagantly vaunted and now long forgotten." Writer after writer, after long experience, has had to confess the inutility of drugs. Yet if we but turn to the therapeutic columns of our medical journals we find receipt after receipt recommended for use in consumption.

As McLean well puts it, in a recent excellent article: † "It is easier to take medicine, it is pleasanter to be told we have only a little bronchitis"; and I might add, it is so easy for the doctor to dump a portion of his heavy responsibility on to the shoulders of some prescription, and to take refuge behind the authority of its introducer.

And yet, since the earliest days, there have not been wanting those who have raised their voices for a hygienic treatment. Celsus,‡ in his *De Medicina*, written in the time of Christ, gives so admirable a *résumé* of such a treatment that I shall trespass on your patience to quote a portion of it here: "If strength permits, one must make long sea voyages, change climate, and seek a denser air than that one lives in" (a reverse of our modern view). "Italy or Alexandria, for example, agree well; in the beginning, invalids are almost always able to make such a voyage, for the disease generally comes on in the most robust period of life—that is, from eighteen to thirty-five" (a statement he borrows from Hippocrates). "If they are not strong enough for long sea voyages, they can take short trips along the coast. If it is impossible to go to sea, one can be carried on a litter, or otherwise. The patient must give up all business and all that worries, must sleep

much, avoid catching cold—lest the cold destroy the advantages won by all these precautions—avoid indigestion, great heat or cold, keep the mouth and neck covered, check the cough by appropriate remedies, and try to suppress the fever, either by diet or abstinence from food. . . . Milk . . . can be given with much advantage. . . . If there is little or no fever one must have recourse to moderate exercise, especially walks and light rubbings. . . . It is wise to give food in the interval of the fever, and to use frictions. . . . But the means which hold first place are regimen, exercise in a carriage, sea voyages, and nourishing food. As they improve, the exercise must be increased, as also the rubbings and the food. Then let them rub themselves while holding the breath, and avoid for a long time wine, bathing, and sexual pleasures." Such was the advice obtainable in the time of Christ. Drugs, it is true, Celsus also, but far less strongly, recommended, but a hygienic and climatic cure was his ideal, and to-day we have not added very much to what he taught.

Come onward nineteen centuries, and let me quote the words of Lauth.* "Hygienic treatment alone can increase the general strength and give the body the force necessary for the struggle. All other means are but adjuncts; there is reason to apply them with judgment under certain special indications dependent on the clinical course of the disease, or on the constitution of the invalid," but, I would add, the real curative factor is and will always remain the intelligent and painstaking use of hygienic measures.

I realize that the faithful carrying out of such a course of treatment is tedious; that it demands on the part of both patient and doctor what the Germans well call "*ausdauer*," lasting-outness, perseverance; that it calls for the most complete cooperation of the patient with his doctor, and his implicit obedience. But we are dealing with a malady so dreadful that even the most heedless patient, if the facts are clearly set before him, will give us his cooperation; with a disease so insidious that even the most light-hearted doctor must realize the responsibility that is on him, and surely the results to be obtained—the happiness of the patient and of his loved ones, the satisfaction of work well and successfully done, will keep us up through it all.

To turn, then, to the hygienic and dietetic treatment of consumption in detail, I would embrace under those terms all such non-medical measures as are directed toward an increase of the vitality of the organism and its resistance to disease. Strictly speaking, this would include climate therapy; but, though I believe that this is but a branch of hygienic treatment, I will here neglect it, as it at least needs, with so lack of faith on the part of our profession, the advantages being too

* Laennec. *Traité de l'auscultation médiate*, édition de la Faculté de méd., Paris, 1819.

† McLean. Personal Observation in Phthisis Pulmonalis. *Journal of the American Medical Association*, February, 1898.

‡ Celsus. *De Medicina*, Paris edition, Delahay, 1855.

* Lauth. *Lecons sur la*

Phthisie, Bonn,

1896.

patent to need demonstration, and confine myself to the other branches of the method—in brief, *exercise, gymnastics, massage, hydrotherapy, rest and sleep, diet, amusements, clothing, and quarters*. To all, or some of these, a partial and, as I believe, half-hearted attention is given, but I am convinced that only the most minute and careful regard to each detail can yield the best results.

Generally it is to the pharmaceutical and not to the more important hygienic precautions that attention is given, so that the average patient supposes that if he faithfully takes the drugs ordered he is doing all that is needed, and follows in the far more important matter of the regulation of his daily life his own sweet will. And for this he is not to blame, when you consider that such hygienic advice as is given, which generally implies a complete reversal of the patient's ideas of living, is not written down and emphasized, but talked to him in the course of a consultation.

The measures are usually specified too indefinitely. To tell a patient to "take plenty of fresh air," to "take enough exercise," to "eat plentifully," to "get enough sleep" is as unsatisfactory as to say "Take enough calomel," "Take a good dose of quinine." How is he to know what is enough, or what too much? Even so good an authority as Powell* thinks that he has said all that is necessary when he says: "The hygienic surroundings must be strictly looked to and as much fresh air as is compatible with the season of the year and the patient's strength be allowed." No one who at any European health resort has seen the admirable effects of the strictly ordered and strictly carried-out discipline of every detail of the patient's life, but must compare its care with the carelessness so common in this land of the free, where patients seem to think that by drinking a given number of glasses of mineral water, or staying a certain number of hours in the open air, they have fulfilled every requirement for their recovery, and feel free to live in every other way as suits them best.

With all invalids, but with the consumptive more especially, it is essential that his life be closely looked to; that he be given written directions, which are to be to him the tables of the law, by obedience to which he is to reach the promised land.

If he is to recover it can only be as a reward of ceaseless vigilance and effort; to no half-hearted seeker after pulmonary health will healing come; if color is to return to his cheeks and vigor to his limbs, if he is to get the upper hand of the disease he is fighting, both he and his doctor must work, and work hard. Given a patient—and such are not too common—who is willing intelligently to use every means, and a doctor who find no detail too trivial for attention where it affects his charge's health, and hygiene, save in very advanced cases, will achieve results which will fully repay us for our toil. But I have already

taken too much of your time, and must hasten to the matter of the carrying out of such a cure. When a patient presents himself for treatment, after a thorough history is taken, after a carefully recorded examination and diagnosis, after as clear a conception as possible has been formed of the exact pathological conditions in the lungs, we medical men are apt to think first and foremost, What medicine shall I give here? If, on the contrary, we would start first to plan and write out (that forgetfulness or misconception may not be pleaded) the details of our patient's life; if we give him a carefully prepared dietary rather of the things that may need to be avoided than of those that can be taken—for all food that is not positively harmful is of value—if we give rules for his exercise accurately stated, for his clothing, amusements, bathing, etc.—in short, for every feature of his life; if we sufficiently impress on him the paramount importance of minute attention to these things and exact a promise of obedience, we will find not only that we will be apt to have made a good step in that most important matter of winning our patient's confidence, but that the portion of our orders devoted to drugs can be made small indeed, without any decrease, possibly an increase, in the excellence of our results.

I personally have found it convenient to classify all hygienic measures under three heads, and this is accurate enough for all practical purposes: Those affecting the patient's surroundings, life, and exercise.

Under surroundings I place all that relates to the situation of his house and the lay of the land around it; the conditions of that house as to sanitation, elevation, exposure, ventilation, and heating; the choosing of his room, its heating, ventilation, and temperature, etc.; his clothing, its weight, nature, and forms. Under conditions affecting his life I would place the hours he keeps, the amount of his sleep, the hours of his meals, and the arrangement of his diet, his bathing and hydrotherapeutic measures, the care of his mouth and voice, and that most important item, the nature and extent of his amusements. Under exercises, I place rules as to walking, its limits, advantages, and abuse, as to massage when needed, and careful details as to pulmonary gymnastics, which I use largely in proper cases.

Planned out in this way not a feature of his life need escape us, and we can keep it all under our control.

As to the special features, each man has his own views. I will only note here certain details I consider most important. The situation of the house and the especial avoidance of a damp subsoil, shown long since by Bowditch to have a causative relation to tuberculosis, should never be left to the patient's choice. That common fault of many houses, overwarm rooms and ice-cold corridors, scarcely needs to be mentioned. The heating is all-important, and I have found that though, with care, excellent results can be had in furnace-heated houses, it demands more labor than where steam heat is available.

* Powell. *Doctors of the Lung*, London, 1893.

The water box of a furnace is utterly inadequate to supply the proper amount of moisture to the superheated, bone-dry air its flues deliver. When not to be avoided, the bad effects of a furnace can be largely done away with by placing a tin water can in each flue, and the rapidity with which they are evaporated best shows how much they are needed. They never give off steam, which would be harmful, but simply restore to the air its normal coefficient of moisture, and are an excellent preventive of catarrh. In the bedroom no furnace heat should be allowed under any circumstances, the flue pipe being closed at the furnace as well as in the flue, and heating of the room being intrusted to the open fireplace. The selection of the room as much as of the house must not be left to the patient's judgment. In such matters he has none. The sharing of his room with another, even his wife, is not advisable, if possibly to be avoided. He needs all the air he can get, and should not be called upon to share it with another. A wall thermometer should be part of the furniture of every consumptive's room; 65° F. is the ideal in winter. Over 70° should be forbidden, too hot being far worse than too cold. The bed, where he spends one third of his life, must be so situated as to avoid direct draughts from the windows, and the bed covers, while warm, must be light, and only single beds tolerated.

The average consumptive, when left to himself, will be found to be very much too warmly clad. Thick, sweat-producing clothing serves no good purpose, weighs down the weakened body, relaxes the superficial capillaries, and does harm. The rule of wool next to the skin all the year, which needs no advocate before a medical assembly, is wonderfully difficult to enforce with the fair sex; yet no one who has worn it even in summer but knows that if of proper thinness and texture it is fully as cool as cotton and less likely to chill when we perspire; nevertheless, partly through its expense and partly through prejudice, it will be impossible to obtain in many cases. Whatever the material, if it is so cut as to leave exposed the apices of the lungs, and thus subject them to chilling, it is bad. What is known to the trade as the high or French neck should be insisted on.

Of the harmfulness in a respiratory trouble of corsets, or at least of tight ones (did any woman ever admit they were tight?), I need not here speak; mullers, so popular everywhere—those common makers of weak throats—are not, I believe, sufficiently recognized as a curse to be banned; while any one who has undressed a consumptive and noted the perspiring skin under the popular and worse than useless chest protector will realize the harm it does.

No patient needs more sleep than the phthisical. The old and recently revived view of tuberculosis as a nervous disease may not be well founded, but the nervous system in common with all the body is exhausted and over irritable, and sleep is its best restorative; therefore, let the patient keep early hours, and see that he

has an exact hour to be in bed, never later than ten, and let him get, if possible, a good nine hours' rest.

There exists among the laity a widespread misapprehension as to the harmfulness of a cold sleeping room, and the fact that if the body be but properly protected from evaporation and chilling there need be no fear of catching cold, even if the surrounding air be at zero, is generally unknown. This fact is borne out, however, by innumerable observations. The statement of Ransome, in Park's *Hygiene*, that the artillery of the Afghan field force, wintering in the bitter cold of Candahar, slept out in tents and preserved good health, while the infantry in barracks suffered severely from pneumonia, is but one of many proofs of this fact; yet a large number of all Americans, especially the consumptives, whatever air they may get in the daytime, habitually sleep in winter in close and unventilated rooms, expecting to get from a small crack of open window enough oxygen for the demands of their economy, and thus spending one third of their life under the very conditions they should most sedulously avoid. As Ransome, in another place,* puts it, "Fresh air day and night must be admitted to all living rooms and bedrooms; and the present foolish dread of what is called 'night air' must be overcome." It is not possible all at once to accustom people to proper conditions. In this matter the process has to be gradual: first, possibly, a small crack, increased nightly till one whole window, and finally two or more are left open; but save in a few generally advanced cases, where it increases the cough, it is soon tolerated, and finally liked.

Mealtime, after what I have said of nutrition in this malady, I need hardly say is the most important hour of the day. The fastidiousness of the pulmonary patient makes it hard to render this hour attractive as it should be, but with increasing outdoor life and exercise the appetite generally returns. Never take the patient's statement that he is eating well at its face value. Cross-questioning will often show that he has no idea of what that means. Exact a record of each meal in the beginning with all cases. When once the appetite is recovered it becomes unnecessary. The usual three meals a day in light cases will often do, but with the addition, where it does not overload the stomach or kill appetite, of a small, nutritious, not necessarily alcoholic, "pick-me-up" at eleven, four, and at bed. These latter supply the organism, whose rate of oxidation is too rapid, with the necessary fuel to carry them to the next meal, and prevent the gone feeling so apt to come on before that time.

The consumptive who has been overfed, who has had rammed down his throat more than he could digest or assimilate, and whose stomach has "gone on a strike," is no rare sight, and should warn us from falling into the error of taxing a debilitated organ beyond its powers in the hope of increasing nutrition.

* Ransome. *Treatise on Phthisis*, London, 1890.

A quiet rest on the bed for half an hour before mealtime and, if gastric catarrh is prominent, the usual glass of hot water sipped meanwhile, I have found very important, as preparing the organ for its work, for the tired man can never properly digest.

Likewise the hour after dinner had best be spent quietly reading or talking, and all walks or drives postponed till digestion is well under way. In this land of fast eaters deliberation at table can hardly be had, but it is useless to expect an organ weakened by disease to dispose of large masses of unchewed and bolted food; yet the examination of the vomitus of tubercular patients will show us how often their meals reach the stomach in this shape.

In cases where the gastric functions are very weak, I get the best results by frequent small meals every one or two hours, with small amounts of predigested or highly nutritious foods, and have thus overcome severe anorexias and *Auseas*, and been able, by degrees, to resume regular meals. But the majority of cases which demand such measures have passed the point when more than amelioration of symptoms can be hoped for.

If the doctor will, in delicate stomach cases, himself plan the bill of fare from day to day, he will find himself rewarded for his pains, and the good effect can be heightened and the appetite stimulated by not letting the patient know beforehand what he is to eat, a knowledge of what is coming at the next meal often depriving a patient of any desire for the food, while a pleasant surprise, on the contrary, is a good appetizant.

In this connection there is no doctor but can advantageously cultivate, with his wife's assistance, a knowledge of cookery, specific directions how to broil a steak, how properly to prepare sweetbreads (a thing, by the way, rarely done), how to cook chops daintily, and fifty other things, being invaluable in a land where good cookery is not always the rule.

The amusements of our patients will tax our ingenuity, for in no item are they so apt to disobey. The average American is not willing, even when his health depends on it, to obey any one, and supposes that if he has taken his medicines he has fulfilled his duty to the doctor and the disease, and believes that how he shall spend his time, where he shall go, and how amuse himself are matters which concern him alone.

It is necessary, therefore, in the beginning, to have it definitely understood that implicit obedience must be given the doctor. Most patients will be rational enough to appreciate that you are working for their good; and as for that class who are doing what they do, as if it were a favor to you, and feel at liberty to disobey when they please, it is wiser, after a patient trial, to throw up the case, and let them seek other aid. In the long run we will gain rather than lose in influence with our patients by such a course.

I have found the greatest difficulty in managing young girls, whose heedless search for pleasure blinds

them to any considerations, save the enjoyment of the moment; older people are generally more manageable, and yield proportionately better results. I have often got better success with relatively severe cases in the latter class than in much lighter ones in the former.

I recall two patients who were under my care: one a young and very lovely girl with slight apical catarrh and consolidation, with no breaking down of tissue; the other, a middle-aged single woman of great determination, with a far more extensive and serious involvement of most of the upper right lobe.

Both were put on a strict hygienic cure with very little medicine: the young girl was occupied with the enjoyment of the attention of many admirers, and unable to resist the temptation to imprudence on every side, or to consistently carry out orders; the older woman devoted her whole heart and soul to the task of getting well, neglected no precaution, followed directions faithfully, and is to-day well and carrying on her calling in an Eastern city successfully; while the other, as I learn, is slowly but surely going down the long hill we all know so well, and approaching a grave she could, had she had but sufficient seriousness of purpose, have avoided.

Thinking of them, the pregnant truth so well put by Dr. McLean, in the article already referred to, is forced upon us—"If the phthisical patient would live, he must work for it."

The surroundings and company of our patients must be as cheerful as possible. The melancholy and depressed patient fights an uphill fight. All games which call for violent physical exertion, like tennis, and overtax a weakened muscular system, ought to be avoided; while I would add my voice to the many which have lately been raised in favor of golf, of which I can speak from experience, as the ideal mild, but interesting, outdoor sport, though in the beginning but a small part of the course should be gone over. Those indoor amusements which subject the patient to overheated, dusty, or vitiated air are, above all, to be avoided: theatres, dancing assemblies, parties, even crowded parlors, artificially lighted, all place the patient under unfavorable surroundings, and at the same time overtax his nervous system, and are not to be heard of.

Church, though hardly to be classed as an amusement, is not to be forgotten. If not draughty or too hot, I have never known it to be harmful.

Horseback, driving, and walking come more properly under the head of exercise, but of amusements they are possibly the best and most helpful.

Night amusements are generally to be avoided, not because there is anything in non-malarious regions in the prevalent fear of night air—certainly in the mountains experience shows its fallacy—but because they come at the end of the day, when the strength is lowest, because they disturb the early bed hour, and because they are only to be had in artificially lighted and generally

overheated halls. Sexual enjoyments should be entirely or all but entirely forbidden; nothing so exhausts the vitality and prostrates the strength. Unfortunately, a large number of patients experience an access of sexual passion in this disease, but reason will generally serve to control them.

Rest for the consumptive can be viewed from two points: rest for the light, incipient, afebrile case, and rest for those who have fever.

To the former rest is important before meals and after exertion, but to the latter it becomes essential, and is our best antipyretic.

With temperature ranging over 100.4° it should be obligatory; and even at 99.4° exercise should be very carefully limited. Rest in a reclining chair, well wrapped up, outdoors, is generally pleasant enough, and certainly most effective; the organism, spared any waste of its forces, can turn itself with undivided strength to combating the disease.

After a faithful trial of it, let me, save in those hopeless cases where anything else is impossible, protest against the custom of putting the tubercular patient to bed for his fever.

Put him in bed and you do a violence to his spirits and hopes which he can ill tolerate, and which often turns the balance to the wrong side; let him, if need be, while equally prone and quiet, lie *on*, not *in*, the bed, and keep on his clothes, and he does not feel, as otherwise he would, that the game is up.

Moreover, bed robs him of what little strength he still has, and in my experience such an order has generally been the beginning of the end.

In patients whose cases are not hopeless the reclining chair in the open air is infinitely to be preferred to any bed. There they can pass their day from ten till four or eight, according to the season, warmly wrapped, reading or talking and enjoying themselves, only provided that that most lamentable invalid's habit of talking of symptoms be forbidden. Exact of your patients a promise not to talk over their cases, or to take their own temperatures, or to follow their own gains or losses of weight, and you have accomplished much.

Hydrotherapy in phthisis has, among the profession, not the position it deserves. It has suffered in the past as much from the untempered zeal of its advocates as from the way in which those unfamiliar with it tried to apply it. The elaborate apparatus illustrated in the writings of its apostles, as in Baruch's recent excellent work, are too elaborate, costly, and cumbersome for general use, and there is need of some simple yet fairly accurate means of availing ourselves of its undeniable advantages in the patient's house. Incidentally, I would say that in phthisis many, if not all, of the excellent results it offers can be got with no more complicated apparatus than a tin tub, a bath thermometer, a big sponge, salt, and a rough Turkish towel.

(To be concluded.)

DR. GEORGE BODINGTON (1840) AND THE OPEN-AIR TREATMENT OF CONSUMPTION.

By A. TUCKER WISE, M.D.
DIPLOME SUISSE FÉDÉRAL: M. R. C. S., L.R.C.P. (LOND.),
MONTREUX, SWITZERLAND.

I POINTED out some years ago* that the late Dr. George Bodington, of Sutton Coldfield, Warwickshire, was the first to devise and carry out the present system of generous diet and open-air exposure for the cure of consumption.

In those days (1840), before the theory of "phlogiston" had collapsed under the influence of microscopic pathology, he had many difficulties to contend against, and his plan of treatment, although successful with a certain number of cases, met with such derision and contempt that he finally gave up the practice, taking lunatics into his house sanatorium instead of consumptives—a laudable course to pursue in his case, as he was returning good for evil to the class who criticised and reviled his project.

The effect of adopting a suitable diet and fresh country air for the treatment of phthisis is rather ancient history, but Bodington grasped the points of their efficacy and brought these remedial agents into systematic working order. Much that he has written in a faded little volume of some sixty pages might be reproduced as a fresh article on the dietetic and open-air treatment of consumption.

Why so many writers on this subject represent the method as having been "made in Germany" I am unable to say. Certainly, Dr. Brehmer carried it out with satisfactory results in 1860, but the plan had been clearly laid down and described by Bodington, who practised it twenty years previous to Brehmer, and who published his success with the cases which were submitted to his scheme of treatment.

Our attention has been directed recently to the remarkable results reported as having occurred under the system of feeding and fresh air as conducted in the Black Forest, a climate which has been compared to that of the English lake district in winter! There is no question as to the efficacy of overfeeding and fresh air in those cases which are fortunate enough to possess digestive organs fairly strong and unimpaired; but we must not lose sight of the highly important part that climate plays—especially mountain air—in the cure of pulmonary consumption.

One good effect following the success of sanatoriums established in inferior climates will be to stimulate the scheme of providing similar institutions in England, where a great deal of what is lacking in climate can be made up in a nutritious and digestible dietary. There is no country in Europe where good food is so cheap and abundant, or meat, fish, poultry, and game of a better quality. The advantage also of patients being treated

* *Upon Winter in its Medical Aspects*, 1884.

by medical men of their own nationality who have an intuitive knowledge of the national constitution—are familiar with the habits and customs of English people and their requirements—is not to be forgotten.

Personally, I am sorry to see our well-tried old remedy—Alpine climate—temporarily slighted in favor of rival sanatoriums with quaint innovations, but in the main simply carrying out effectually the treatment originated by Bodington, from whose *Essay on the Cure of Pulmonary Consumption on Principles Natural, Rational, and Successful* I may be permitted to quote. He writes: "I should recommend to one thus consuming away, under the influence of this *wasting disease*, a nutritious diet of mild, fresh animal and farinaceous food, aided by the stimulus of a proper quantity of wine, having regard to the general state and condition of the patient. . . . I have, as will be found by a perusal of the following pages, employed a nutritious and moderately stimulating diet with much success; and without that I do not think the other means could have been so effectual or the treatment complete. . . . I have taken for the purpose a house in every respect adapted, and near to my own residence, for the reception of patients of this class. . . . It is presumed that the advantages to be derived from systematic arrangements with regard to exercise, diet, and general treatment, with the watchfulness daily, nay, almost hourly, over the patient of a medical superintendent, great advantages may be obtained by the consumptive patient treated in this way." Speaking of the therapeutic agents in use at that time, in 1839, he continues: "One mode of treatment consists in shutting the patients up in a close room, to exclude, as far as possible, the access of the atmospheric air; and thus forcing them to breathe over and over again the same foul air contaminated with the diseased effluvia of their own persons . . . this is indeed a treatment founded on the most erroneous principles." Referring to the inhalation of gases of various kinds, Bodington says: "The only gas fit for the lungs is the pure atmosphere freely administered, without fear; its privation is the most constant and frequent cause of the progress of the disease. To live in and breathe freely the open air, without being deterred by the wind or weather, is one important and essential remedy in arresting its progress; one about which there appears to have generally prevailed a groundless alarm lest the consumptive patient should take cold. . . . Farmers, shepherds, ploughmen, etc., are rarely liable to consumption, living constantly in the open air; whilst the inhabitants of towns and persons living much in close rooms, or whose occupations confine them many hours within doors, are its victims. The habits of these latter ought, in the treatment of the disease, to be made to resemble as much as possible those of the former class, as respects air and exercise, in order to effect a cure. . . . I come now to the most important remedial agent in the cure of consumption, that of the free use of a pure atmosphere. . . .

"The abode of the patient should be in an airy house in the country; . . . the patient ought never to be deterred by the state of the weather from exercise in the open air; if wet and rainy, a covered vehicle should be employed, with open windows. The cold is never too severe for the consumptive patient in this climate; the cooler the air which passes into the lungs the greater will be the benefit the patient will derive . . . and means applied to stimulate and invigorate the nutritive, sanguiferous, and muscular powers; wine and such nourishing diet as the stomach could bear, and by means applied to soothe and allay nervous excitement locally and generally. . . . Apartments should be kept cool and airy, corresponding to the external atmosphere, which should be courted and indulged in to the utmost."

After impressing on the reader the necessity of a generous diet, consisting of fresh meats, eggs, farinaceous food, beef tea, milk, etc., as much as the digestion could bear, with wine or wine and water, according to circumstances, he concludes by the relation of some cases, and a reiteration that the bedroom should be cool, airy, and properly ventilated, and the sitting room should have the window wide open.

I have quoted Dr. George Bodington at some length in the endeavor to point out by his own words and practice that we must regard him as the originator and introducer of the modern treatment of pulmonary tuberculosis. I am not aware of any one having forestalled him in clearly laying down the principles which now guide us in all health resorts and sanatoriums devoted to the cure of consumption.

Bodington must be accredited, too, with the courage of his opinions, for in those days of antiphlogistic remedies it was a bold, intelligent innovation deserving of all recognition and praise. Even that distinguished physician Sir James Clark sarcastically alluded to it at the time as the "beefsteak and porter system," which he decidedly condemned.

Therapeutical Notes.

Salicylated Gelatin for Eczema.—Schwimmer (*Wiener medizinische Presse; Journal de médecine de Paris*, November 20th) gives the following:

R Salicylic acid	10 parts;
Glycerin	10 "
Gelatin	30 "
Water	30 "

Dissolve by the aid of heat. The author recommends this application for vesicular eczema.

The Treatment of Baldness.—Barie (*Cronica médica*, October 31st) gives the following:

R Hydrochloric acid	75 drops;
Alcohol	2,250 "

M.

Rub the hairy scalp every night with this liquid and the falling of hair will cease.

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SANANDA EST HAVANA.

SINCE it is not the present intention of the American people to hold Cuba indefinitely, it is not unnatural for them to ask why they should pay for such an enormous work as that of bringing Havana into such a condition that it will be fit for civilized people to live in, and cease to be a nursery of yellow fever and other pestilential disease. But, while it is quite proper for us to endeavor to make an arrangement that will fix the ultimate responsibility for the cost on the Cubans themselves, we can not afford to let any difficulty in effecting such an arrangement stand in the way of immediate action on our part. Havana must be regenerated for our own sake, and, even if it were certain that we should never get back any portion of the cost of accomplishing the work, we ought to undertake it at once. Millions of dollars' damage to American trade, especially in the Gulf States, is entailed by every considerable outbreak of yellow fever on our soil. Often in a single year the loss amounts to more than enough to pay for the work of putting an end to the danger once for all. There is only one way of doing this, and that is by extending to the Cuban cities, and particularly Havana, the sanitation that is seen in our own large cities and in those of all other civilized countries.

We can not overlook the magnitude of the task, as one may satisfy himself by studying General Greene's report, published in the *New York Times* for January 1st. And we must not expect such a huge cess-pool as Havana to be cleansed within the few months that remain to us before the next annual summer outbreak of yellow fever takes place. It is true that the late Colonel Waring declared that the work much be done before the 1st of June, but we fear that such speed is hardly practicable. An entire sewerage system has to be created and practically all the houses connected with it. We learn from General Greene's report that what few sewers there are, built at the expense of persons whose houses they drain, are of unknown course, no records or maps relating to them having ever been made, and, even were that not the case, there is little probability that these few sewers could be turned to account as portion of an adequate system of drainage. Practically, too, the whole

city should be repaved, with the removal, so far as possible, of the soil beneath the present pavements, and in the unpaved streets, for it must be reeking with the filth that has sunk into it continually for generations.

Together with all this mechanical work, there must be an enlightened and efficient sanitary board acting under regulations carefully drawn to meet the requirements of the town. All these needs are pressing. They should be met immediately. We shall not have done our full duty to the people of Cuba or to ourselves if we allow niggardliness to hold us back from meeting them completely and with all possible promptness.

DIPLOMA MILLS.

IN our issue for December 31st we expressed a curiosity to know what the "Independent Medical College of Chicago" was. We have received an answer in the shape of a communication from Dr. J. A. Egan, secretary of the Illinois State Board of Health, from which we gather that it is, as we suspected, a "diploma mill."

The existence of these "diploma mills" has done more to damage the profession of medicine in the United States and to lower its prestige in other countries than all other considerations put together. Philadelphia was at one time the headquarters of these fraudulent institutions, but it has purged itself of the stigma. Now it appears that, owing to the faulty condition of the law, the State of Illinois is the principal centre of the abomination. We feel satisfied, however, that this reproach will not very long be permitted to disgrace that State, for the members of the medical profession, reputable schools, medical bodies, and individuals are bestirring themselves to wipe it off the escutcheon of the State, and with the aid of a thoroughly enlightened governor, such as Governor Tanner has shown himself to be, they are very likely to succeed.

The mischief lies not solely in the fact that a few hundred incompetent, though legally qualified, practitioners are thrown loose upon the various States of this country to practise where they like with their bogus diplomas, since the colleges are legally incorporated, save in States like New York, where a State examination is required of all candidates prior to the graduation of their diplomas as licenses to practise, but it shows itself still more widely in the want of reciprocity abroad, of which we complain. It must not be expected that foreign countries can well afford to recognize between all the unneeded qualifications of the country gentlemen; and while this is so, it is not surprising that the United States is the only one of civilized nations to any

in the world, it is to be feared that the *average* value of American diplomas abroad is greatly depreciated by virtue of these fraudulent schools. For it must be remembered that, save in exceptional circumstances, it is not the men from the best American colleges that leave their native country to practise elsewhere. They are tolerably sure of success at home. But it is to a large extent the holders of diplomas from these diploma mills who flaunt their "American" diplomas in foreign countries, as in the case of the gentleman who advertised his examination in India for the M. D. degree of the Independent Medical College of Chicago, to which we referred in our issue for December 31st.

These blots upon our profession, and we may add upon our country, inevitably lower the average status of our professional men abroad. It is no answer to criticism to say that at home such diplomas are held of no account by the reputable colleges and members of the profession. The obvious reply is, "They are granted by regularly constituted and legalized colleges whose diplomas confer the right to practise at home. You may have others, but if so we should welcome more graduates from them, and spare you as many of these to your own country as possible."

The whole difficulty seems to lie in the fact that in Illinois, and possibly in other States also, "it has been possible," to quote from an open letter addressed to Governor Tanner by the State board of health for Illinois, "for any three or more persons to obtain a charter from the secretary of state for a nominal fee, for the organization of any institution for an educational purpose. As a result of this there are at present in the State (of Illinois) over two dozen fraudulent educational institutions, aptly termed 'diploma mills,' which confer degrees in medicine, pharmacy, law, dentistry, divinity, arts and sciences, etc., upon any applicant in Illinois, in the United States, or anywhere in the inhabitable world, who possesses the necessary fee. This varies from five dollars to one hundred dollars, depending entirely upon the credulity and gullibility of the applicant."

In this letter various quotations are given to show the general opinion in the United States concerning this matter. In one of them, however, a quotation from the *Report of the Committee on Foreign Relations of Dental Faculties*, Omaha, August, 1898, the somewhat incorrect and unjust statement occurs: "The task of securing the repeal of the vicious law is too great for the courage of its (sc. the State of Illinois') reputable men, for ignorance and vice have struck hands in its maintenance." The present action of the State board of health, and the continuous agitation that has for some

time been kept up, and which it is now hoped is within range of success, are evidence to the contrary.

Now, inasmuch as we are informed that the law of Illinois gives to the secretary of state no discretion in the issuance of such educational charters, it being obligatory upon him to grant them whenever an application is properly made and the fee paid, it is clear that the authorities are not personally to blame. But it is also equally clear that an amendment of the law is required, and to this end the State board of health for Illinois has addressed to Governor Tanner the open letter before referred to asking for his aid in the matter. The course proposed by the board is to confer the power of issuing charters on some educational body in the State, which it is proposed should also have power to amend or revoke the charters for sufficient cause at its discretion.

This latter clause is of the utmost importance, for it by no means follows that an institution which begins well will not at some future time fall far below the desired standard.

At the same time we can not altogether exonerate those States and countries which take no steps toward establishing, as has been done by the State of New York, some practical limited examination as a *sine qua non* of the legalization of a diploma, no matter whence obtained. Such examinations should be as purely practical and as free from mere scholastic requirements as possible. If that were the case it would exclude the holders of bogus diplomas, compel the holders of reputable diplomas, who may be a little rusty, to polish themselves up to date, while those who come fresh from modern schools would, of course, find in it no barrier at all.

The Illinois State Board of Health has our hearty sympathy in the efforts it is at present making to remove this foul blot from the escutcheons of the State, the American medical profession, and the country.

MINOR PARAGRAPHS.

A CASE OF INTESTINAL MYIASIS.

MALEI (*Riforma medica*, 1898, No. 167; *Centralblatt für innere Medizin*, December 24th) reports the case of a woman, twenty-two years old, a teacher, who regularly in summer passed with the faeces little maggots that displayed lively movements. Examination showed that they were the maggots of *Sarcophaga* [*Sarcophila?*] *carminia*. Mention is made of Joseph's account of this affection in 1887, and the remark is added that it sometimes gives rise to severe symptoms, such as abdominal pains, epileptic seizures, vertigo, vomiting of blood, and anaemia. It is to be presumed that the ova are swallowed, escape the action of the digestive juices, and attach themselves to the intestinal wall, where they may live for days together without air.

THE PROMISCUOUS SALE OF ABORTIFACIENTS.

SOME time ago an ingenious blackmailing scheme was extensively practised in England. Newspapers there, as well as in some parts of this country, habitually accept advertisements of proprietary medicines which, under the ostensible purpose of "correcting female irregularities," are really meant to attract the attention of women whose desire it is, for whatever reason, to procure abortion on themselves. The names and addresses of women who had written for these remedies were used for the purpose of sending threatening letters, telling the victims that unless they remitted the sum of two guineas to cover costs and promised solemnly never to again attempt to commit the awful crime of procuring abortion, criminal proceedings would be instituted against them. Some one had the courage to expose this diabolical fraud, with the result that the perpetrators were brought to trial. Incidentally, attention was directed to the subject of the advertisement of such nostrums in even reputable newspapers, and the judge at once stated that the newspapers advertising remedies which purported, or were clearly meant, to be abortifacient, were accessories before the fact to the crime of procuring abortion, and were therefore liable to prosecution. The police authorities of London immediately acted upon this momentous decision and issued a proclamation, stating that all newspapers which continued to publish advertisements of that character would, after being duly warned, be held liable to criminal prosecution. We commend the promptitude of this action on the part of the London police, and recommend both the English judge's dictum and the action of the police to the law authorities in this country for imitation.

A FOREIGN BODY IN THE EUSTACHIAN TUBE.

TRAUTMANN (*Münchener medizinische Wochenschrift*; *Wiener klinische Wochenschrift*, December 18th) relates a case in which, in some unknown manner, a cherry-stone became lodged in the Eustachian tube, rendering the passage impervious to air. The air contained in the tube was absorbed, and this was followed by depression of the drum membrane and reduction of the power of hearing. Inflammation was set up in the tube and extended to the middle ear, resulting in perforation of the membrana tympani and chronic suppuration. One day, while the ear was being washed out, the cherry-stone was expelled into the throat, and the subjective symptoms ceased at once. They had consisted of an annoying sense of dragging in the side of the throat, pressure in the ear, pain on swallowing, and confusion in the head.

A NEW GERMAN OPHTHALMOLOGICAL JOURNAL.

WE have received the prospectus of the *Zeitschrift für Augenheilkunde*, the publication of which begins this month. It is to be edited by Professor Kuhnt, of Königsberg, and Professor von Michel, of Würzburg. It is to be published in Berlin, by S. Karger, and will appear in monthly numbers of about eighty pages each.

AN INAUDIBLE SUGGESTION.

THE *Montreal Medical Journal* for November (M. J. *ici*, January) refers to a recent address by Sir James Crichton Browne before the Pharmaceutical Society of Great Britain, in which that gentleman spoke of "the

innate stupidity of the average homicidal poisoner in choosing the means for disposing of his victim," and expressed wonder that such poisoners did not use agents that would "perplex the clinical observer, baffle the pathologist, and set at naught the skill of the analyst." Surely Sir James Crichton Browne can not have reflected upon the chance of his address coming to the attention of persons disposed to homicide, or he would not have cast out suggestions by which they might profit. Poisoners do not need to be instructed.

ICHTHYOL IS THE TREATMENT OF SMALL-POX.

MUCH effort has been directed toward the prevention of pitting as the result of small-pox, but this, it seems, is not all that is aimed at in the employment of ichthyol. Hoerschell-Mann, a St. Petersburg physician (*Klinisch-therapeutische Wochenschrift*; *Gazette hebdomadaire de médecine et de chirurgie*, December 25th), finds that applications of a mixture of ten parts of ichthyol and eighty parts of lanolin prevent pustulation and decidedly abbreviate the course of the cutaneous manifestations of the disease.

"TO THE LORE."

THE *International Dental Journal* for January contains a very interesting and readable article on "Tooth Lore, from the pen of Dr. George L. Parmelee. The various myths, superstitions, etc., attaching to the teeth among different peoples, north, south, east, and west, are commented on; history, poetry, bibliography, all are drawn upon for material, which is put together into a very readable article.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending January 7, 1899:

Week ending Dec. 31. Week ending Jan. 7.

DISEASES.	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	18	9	15	12
Scarlet fever.....	141	11	132	4
Cerebro-spinal meningitis.....	0	11	0	4
Whooping-cough.....	142	9	127	8
Diphtheria.....	155	23	149	34
Group.....	16	11	13	7
Tuberculosis.....	129	143	189	177
Small pox.....	3	0	1	0
Chicken pox.....	11	0	29	0

Immunization against Morphine. Carlo Goiffredi (*Giornale internazionale di scienza e medicina*, November 15th) thus concludes a paper on his further researches on morphine immunization: "It is possible to obtain in dogs an habituation to large doses of morphine differing from that in man in that the suspension of its administration causes no phenomena of abstinence." 2. The serum of animals so treated possesses an antitoxic, therapeutic, and preventive action against morphine poisoning, even when the subjects of experiments are animals very susceptible to the action of the drug, such as chickens. 3. The antitoxic properties of the serum are not due to the presence of excreted morphine since between the excreted morphine and its ex-

only an incomplete nosographic antagonism from which no benefit can be derived in poisoning by these alkaloids. 4. Morphine in contact with antimorphinic serum does not undergo any modification either permanent, physical, chemical, or biological; so that it is not possible to interpret the antitoxic action of the serum as a fact of an exclusively chemical order.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, and cholera were reported to the supervising surgeon-general of the United States Marine-Hospital Service during the week ending January 7, 1899:

Small-pox—United States.

Detroit, Mich.	Jan. 1.	4 cases.
Minneapolis, Minn.	Dec. 8.	1 case.
Chandler, Oklahoma	Dec. 30.	1 "
Daggett, Oklahoma	Dec. 30.	1 "
Parkland, Oklahoma	Dec. 30.	1 "
Saes and Fox Agency, Oklahoma.	Dec. 30.	1 "
Stroud, Oklahoma	Dec. 30.	1 case.
Ball Hill, Pa.	Dec. 31.	1 "
Charlottesville, Pa.	Dec. 31.	Small-pox suspected.
East Vincent Township, Pa.	Dec. 31.	1 case.
Everett, Pa.	Dec. 31.	5 cases.
Homer City, Pa.	Dec. 31.	2 "
Hopewell, Pa.	Dec. 31.	4 "
Houstonville, Pa.	Dec. 31.	7 "
New Granada, Pa.	Dec. 31.	1 case.
Pittsburgh, Pa.	Dec. 31.	1 "
Steelton, Pa.	Dec. 31.	11 cases.
Waterfall, Pa.	Dec. 31.	1 case.
Alexandria, Va.	Jan. 4.	8 cases.
Newport News, Va.	Dec. 31.	4 "
Norfolk, Va.	Dec. 31.	10 "
Rock Springs, Wyoming.	Dec. 24.	1 case.

Small-pox—Foreign.

Lorenzo Marques, Delagoa Bay, Africa.	May 1-31.	5 deaths.
Lorenzo Marques, Delagoa Bay, Africa.	June 1-30.	4 "
Lorenzo Marques, Delagoa Bay, Africa.	July 1-31.	14 "
Rio de Janeiro, Brazil.	Nov. 11-25.	28 cases, 11 "
Liverpool, England.	Dec. 20-21.	1 case, 1 death.
Madras, India.	Nov. 26-Dec. 2.	1 case, 1 "
Akumori Ken, Japan.	Nov. 18-Dec. 8.	55 cases, 13 deaths.
Hiojo Ken, Japan.	Nov. 18-Dec. 8.	1 case.
Kanagawa Ken, Japan.	Nov. 18-Dec. 8.	1 "
Nagasaki Ken, Japan.	Nov. 18-Dec. 8.	1 "
Moscow, Russia.	Dec. 3-10.	17 cases, 3 "
Odesa, Russia.	Dec. 2-17.	6 "
Warsaw, Russia.	Nov. 26-Dec. 17.	15 deaths.
Constantinople, Turkey.	Dec. 12-19.	11 "
Smyrna, Turkey.	Dec. 4-11.	2 "

Yellow Fever—Foreign.

Rio de Janeiro, Brazil.	Nov. 19-25.	1 case, 2 deaths.
Baranquilla, Colombia.	Dec. 2-9.	1 case, 1 death.
Havana, Cuba.	Dec. 15-29.	4 deaths.
Vera Cruz, Mexico.	Dec. 15-27.	2 "
Vera Cruz, Mexico.	Dec. 22-29.	2 "

Cholera—Foreign.

Madras, India.	Nov. 26.	2 deaths.
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Mushroom Juice as an Antitoxine against Serpent Venom. The Paris correspondent of the *Lancet* for December 24th says that M. Phisalix gave the result of some experiments which he had made on the use of mushroom juice as an antitoxine against serpent venom at the meeting of the Academy of Sciences held on December 12th. He first of all pointed out that tyrosine, which is the chemical nucleus of all albuminous bodies, when extracted from the juice of serpent, has an immense power against their venom. He said that he had been led to seek whether the juice of mushroom, which contains

plenty of tyrosine and some ferments as well, would not possess the same properties. He made various experiments and found out that all kinds of mushrooms possess a substance which acts as an antitoxine against serpent venom. If, for instance, the juice of the ordinary hot-bed mushroom is extracted by pressure or by maceration in water and inoculated into a guinea-pig, the animal is rendered absolutely refractory to serpent venom. Unfortunately, however, the inoculation seems to possess toxic properties which vary in degree according to the size of the dose. In the rabbit, for instance, the injection of twenty-five cubic centimetres of mushroom juice is fatal, the animal dying from intervascular coagulation. With a view to avoiding these results M. Phisalix tried filtering and boiling the juice, but all the same the toxic properties remained, although they were much diminished.

What's in a Name?—We have read in some paper, which we do not recollect, of a young lady who went into a bookstore and asked for a copy of *Appendicitis*. "What is the author's name, Miss?" asked the clerk. "Thackeray," replied the fair purchaser. Whereupon the clerk brought her *Pendennis*. And he was right.

Partial Excision of the Urethra.—Dr. S. Baumgarten (*Centralblatt für die Krankheiten der Harn- und Sexual-Organen*, 1898, vol. ix, p. 119; *Annales des maladies des organes génito-urinaires*, December, 1898) reports the case of a man, thirty-three years of age, who had had gonorrhoea six years previously, and who presented himself with a stricture of the urethra, which permitted the passage of only a filiform bougie. The stricture, which was very dense, was progressively dilated until a No. 13 bougie (French scale) could be passed. Exploration of the bladder discovered the presence of an elongated calculus. As the dilatation made no further progress, perineal section was performed, the calculus extracted, and the strictured portion of the urethra was excised. A cure without any complications followed.

The American Breakfast.—Dr. Boardman Reed (*Journal of the American Medical Association*, December 21th; *Philadelphia Medical Journal*, December 31st) believes that the American breakfast is most irrational and is one of the factors responsible for the prevalence of dyspepsia, the ice-water habit being another, and rapid eating a third. He believes in the frugal Continental method of breaking fast, but if a large meal is eaten in the morning, it should, with a view of favoring the starch digestion, be arranged as follows: (1) Cereals well masticated, and accompanied by rolls or bread and butter to carry down plenty of saliva; (2) potatoes with more bread and butter if desired; (3) meat or eggs, accompanied by a little salad; (4) fruit; (5) coffee or chocolate. Ice water retards digestion, both by lowering the temperature of the contents of the stomach and by an overdilution of the gastric juice; it may also damage the mucous membrane and lead, ultimately, to catarrhal inflammation in persons otherwise predisposed to that affection.

Silence at the Operation Table.—Hubener (*Zeitschrift für Hygiene und Infektionskrankheiten*, 1898, vol. xxviii, No. 3; *Presse médicale*, December 7th) has made a series of experiments to ascertain the part played by the mouths of those about the operating table in producing wound contamination. On an operating table he disposed crosswise four Petri dishes. Then, having

rinsed his mouth with a culture of *Bacillus prodigiosus*, he stationed himself about twenty inches from the nearest plate and for ten minutes spoke, sometimes in an ordinary voice, sometimes in a low, and sometimes in a high one.

In every case, and especially when he had spoken in a high voice, cultures of the bacillus developed in the Petri plates, being particularly abundant in those plates nearest to him. Similar experiments conducted by speaking through a mask similar to an Esmarch's chloroform inhaler containing a layer of absorbent cotton left the plates sterile.

Bacilli in Hailstones.—According to the *Druggist's Circular and Chemical Gazette* for December, quoting the *Botanical Gazette*, F. C. Harrison has examined hailstones bacteriologically and obtained cultures of *Penicillium glaucum*, *Mucor* sp. [sic], *Aspergillus* sp. [sic], *Bacillus fluorescens liquefaciens*, a protean form of *Proteus vulgaris*, and a bacillus and a coccus apparently hitherto unknown, for which he proposed the names of *Bacillus flavus grandinis* and *Micrococcus mollius grandinis*.

The Association of the Alumni of Mount Sinai Hospital will hold its next meeting at the Arena, No. 39 West Thirty-first Street (telephone, 1056-38), on Monday, January 16th, at 8.30 p. M. The paper of the evening will be entitled Experiences in the Gynecological Service of Mount Sinai Hospital, by Dr. P. F. Munde.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Medicine, on Tuesday evening, the 10th inst., the following papers were presented for discussion: Auto-intoxication, by Dr. A. W. Hurd; Membranous Enteritis as found in Nervous Diseases and Insanity, by Dr. H. A. Wood; The Relation between Physical and Mental Diseases, by Dr. H. P. Frost; A Few Notes on Paralysis, by Dr. H. Kuhlman; and Notes of Cases, by C. J. Patterson.

The Mount Sinai Hospital.—Dr. Max Rosenberg has been appointed as admitting physician to Mount Sinai Hospital.

Changes of Address.—Dr. Edwin R. Chadbourne, to Pasadena, California. Dr. W. J. Copeland, from Elmira, N. Y., to Hornellsville, N. Y.

Marine-Hospital Service.—Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending January 5, 1899:

PETTUS, W. J., Passed Assistant Surgeon. To proceed to Norfolk and Newport News, Va., for special temporary duty. January 3, 1899.

PERRY, J. C., Passed Assistant Surgeon. Relieved from duty at Port Townsend, Wash., to take effect with the arrival of GARDNER, C. H., Passed Assistant Surgeon, and to retain command of the Port Townsend Quarantine Station. January 3, 1899.

STEWART, W. J. S., Passed Assistant Surgeon. To proceed to Alexandria, Va., and Hamlet, Md., for special temporary duty. December 31, 1898. Relieved from duty at bureau and directed to proceed to Vineyard Haven, Mass., and assume command of service. January 3, 1899.

GARDNER, C. H., Passed Assistant Surgeon. To proceed, relieved from duty at Baltimore, Md., to proceed to

Port Townsend, Wash., and assume command of service. January 3, 1899.

TABB, S. R., Assistant Surgeon. Upon being relieved from duty at Vineyard Haven, Mass., and upon expiration of leave of absence granted by bureau letter of November 29, 1898, to proceed to Baltimore, Md., and report to medical officer in command for duty and assignment to quarters. January 3, 1899.

HOLZENDORF, B. E., Hospital Steward. Granted two days' extension of leave of absence. December 30, 1898.

Appointments.

CHARLTON, CHARLES G., of South Dakota, to be junior hospital steward. December 30, 1898.

SOUTHARD, FRANK A., of Indiana, to be junior hospital steward. December 30, 1898.

PURIFOY, JOHN, Jr., of Alabama, to be junior hospital steward. December 30, 1898.

Society Meetings for the Coming Week:

MONDAY, January 16th: New York Academy of Medicine (Section in Ophthalmology and Otolaryngology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, January 17th: New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Kings (annual) and Oswego (semi-annual—Cooperstown), N. Y.; Connecticut River Valley Medical Association (Bellows Falls), Vermont; Baltimore Academy of Medicine.

WEDNESDAY, January 18th: Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, January 19th: New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni of St. Louis; Atlanta Society of Medicine.

FRIDAY, January 20th: New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Births, Marriages, and Deaths.

Marriages.

HUMPHREY, THOMAS, D. D., 4th, on Wednesday, Jan. 13, 1899, Dr. J. C. Humphrey, of Saratoga Springs, N. Y., and Miss M. C. Thompson, of New York City.

JANSEN, GEORGE, D. D., 1st, on Wednesday, Jan. 12, 1899, Dr. J. C. Jansen, of Florida, N. Y., and Miss Sarah B. C.

MURRAY, MARGARET, D. D., 1st, on Tuesday, January 11, 1899, Dr. J. C. Murray, of Worcester, Mass., and Miss M. C. Murray, of New York City.

WALKER, JOHN, D. D., 1st, on Wednesday, January 12, 1899, Dr. J. C. Walker, of New York City, and Miss M. C. Walker, of New York City.

Died.

CHESEBRO.—In Providence, Rhode Island, on Saturday, January 7th, Edmund Denison, Jr., son of Dr. Edmund D. Chesebro.

CLEVELAND.—In Spartanburg, South Carolina, on Wednesday, January 4th, Caro Virginia Cleveland, wife of Dr. Jesse F. Cleveland.

HOYT.—In Canandaigua, N. Y., on Tuesday, December 13th, Dr. Charles S. Hoyt, in the seventy-sixth year of his age.

HUZZA.—In New York, on Friday, December 9th, Dr. Thomas H. Huzza, of Atlanta, Georgia, aged thirty-five years.

LE ROUX.—In New Orleans, on Tuesday, December 27th, Dr. Charles Louis Le Roux, of Pass Christian, Mississippi, in the fifty-third year of his age.

MCMAHUS.—In New York, on Thursday, January 5th, Dr. Charles W. McMahus, aged twenty-two years.

NICOLL.—In Shelter Island, N. Y., on Wednesday, January 4th, Dr. Samuel B. Nicoll, in the seventy-fourth year of his age.

NOTT.—In Union, South Carolina, on Wednesday, January 4th, Dr. William B. Nott, son of Dr. Thomas E. Nott, of Spartanburg, South Carolina.

ROCHON.—In Glens Falls, N. Y., on Friday, January 6th, Dr. Charles A. Rochon, in the thirty-seventh year of his age.

RODGERS.—In Bennington, Vermont, on Wednesday, January 4th, Mary D. Rodgers, wife of Dr. Lyman Rodgers.

SHARER.—In Little Falls, N. Y., on Sunday, January 8th, Dr. John P. Sharer, in the seventy-fifth year of his age.

STILLMAN.—In Andover, N. Y., on Monday, December 5th, Dr. Edwin M. Stillman.

TAYLOR.—In New York, on Saturday, January 7th, Elizabeth M. Taylor, wife of Dr. Robert W. Taylor.

WEBSTER.—In Troy, N. Y., on Friday, January 6th, Dr. Stephen Henry Webster, in the thirty-fifth year of his age.

WHITE.—In Utica, Mississippi, on Saturday, December 31st, Dr. A. S. White, in the thirty-second year of his age.

Letters to the Editor.

THE LAPLACE INTESTINAL-ANASTOMOSIS FORCEPS.

1828 SOUTH RITTENHOUSE SQUARE,
PHILADELPHIA, January 9, 1899.

To the Editor of the *New York Medical Journal*:

SIR: In last week's issue of your journal, Dr. Genella, while describing a modification of my clamps for intestinal anastomosis, says that his "instrument is superior to Dr. Laplace's modification of Dr. Murphy's," etc.

I wish to state that the description of my forceps, as presented to the American Medical Association at Denver last June, and described in the *Philadelphia Medical Journal* for June 9, 1898, and in the *Philadelphia Polyclinic* for December 3, 1898, shows no resemblance to the Murphy button, and is in no way a modification of that device.

Furthermore, the device presented by Dr. Genella is identical with one which on November 23, 1898, at the meeting of the Philadelphia County Medical Society, I

stated that I had discarded over a year before, as not having all the necessary qualities, which are possessed by my new forceps, for lateral as well as end-to-end anastomosis (*Philadelphia Polyclinic*, December 3, 1898).

ERNEST LAPLACE, M. D.

ALCOHOL AS AN ANTIDOTE FOR EXTERNAL CARBOLIC-ACID POISONING.

25 WEST THIRTY-FOURTH STREET,
NEW YORK, January 7, 1899.

To the Editor of the *New York Medical Journal*:

SIR: My attention has been directed to the subject of carbolic acid by an article which appears in the *New York Medical Journal* for this date, by Bernard Weiss, M. D., who reports a case of local poisoning with pure carbolic acid injected into the vagina with a fountain syringe, the patient having put pure carbolic acid into water after it had been introduced into the fountain bag. He treated the case with sodium-sulphate solution. This sodium sulphate forms with carbolic acid a sulphocarbonate of sodium, and neutralizes the effect of carbolic acid. Dr. Weiss also states that "this chemical antidote even Wittlaus fails to mention in his *Chemistry*."

No doubt sodium sulphate does exercise a soothing effect in local carbolic-acid poisoning, but it will not prevent the blistering or the deep escharotic effect of carbolic acid when applied pure to the tissues. For this reason and because the profession needs an antidote that will at once neutralize the effect of carbolic acid, and render it in a moment's time perfectly inert, no matter how or to what tissues applied, I present this communication.

Dr. Seneca D. Powell, of New York, has for a long time used in his clinics at the Post-graduate Hospital an antidote that we have all come to recognize as a specific. I allude to alcohol, and it is not an unusual occurrence to see Dr. Powell, in the presence of the class, catch in his open hands a quantity of pure carbolic acid poured into them by a nurse from a bottle. In a few moments the doctor puts his hands into a basin of pure alcohol, and no escharotic effect is observed whatever from the action of the carbolic acid upon the skin. I was somewhat surprised when I saw this first experiment, but when I recognized the result I was convinced of the scientific fact. At the present time we are flushing out abscess cavities with pure carbolic acid and washing them out a few moments later with pure alcohol. In empyema Dr. Powell, after making a large opening in the chest wall, washes out the cavity with a ten-per-cent. solution of carbolic acid, after which pure alcohol is used, and no bad effect has thus far been observed from this treatment. The cavity of the pleura is rendered aseptic. From personal observations and demonstrations in the use of pure carbolic acid followed by the use of alcohol, I can state to the profession positively that we have in alcohol an absolutely safe and sure specific against the escharotic action of pure carbolic acid. And I believe that this fact should be given wide publication to the profession and even to the laity, because in cases of carbolic-acid poisoning with homicidal intent, if, immediately after the administration of the poison, alcohol was thrown into the stomach of the individual, the poisonous effect of carbolic acid would be at once neutralized. However, as to the subsequent constitutional effect from the absorption of the new compound formed I can not speak, but certainly in all cases of local

carbolic-acid poisoning, particularly in such a case as that mentioned by Dr. Weiss, I have found that alcohol is an absolute, powerful, and immediate specific.

A. M. PHELPS, M. D.

THE AMERICAN GYNÆCOLOGICAL SOCIETY AND ANTISTREPTOCOCCUS SERUM.

2945 GROVELAND AVENUE, CHICAGO, December 31, 1898.

To the Editor of the *New York Medical Journal*:

SIR: In your issue for December 3, 1898, there appears a letter from Dr. Pryor, of New York, in regard to the work of the committee appointed by the American Gynæcological Society to investigate and report upon the efficacy of antistreptococci serum at the next annual meeting of that society. In this communication it is stated that the committee recommends the use of the serum prepared by the New York board of health, and furthermore, that it is "manifestly desirable that one kind of serum be employed in all cases," etc.

To many physicians throughout the United States who have had more or less experience in the use of blood serums it will doubtless be difficult to comprehend the "manifest" desirability above mentioned, and also why discrimination should be made in favor of the serum prepared by the New York board of health. This discrimination seems particularly puzzling from the fact that boards of health are not generally known as manufacturers; and the one in question has been repeatedly and unmercifully scored by both the medical and lay press, as well as by hundreds of physicians, for engaging in a commercial venture which "manifestly" does not come within its legitimate province. Furthermore, I am assured by one connected with this board that, so far as the antistreptococci serum is concerned, only a limited quantity of it has been distributed among the physicians of New York, and none of it has been permitted to pass beyond the confines of that city. If this is true it necessarily follows that the serum's reputation as a "standard" product depends very largely upon what the New York board of health says about it, and the faith with which it is expected to be gulped down by the profession at large. Very few serums become "standard" before they are known outside of the laboratory where they are prepared.

To the intelligent readers of the *Journal*—which includes the entire list—it is well known that there are several American manufacturers of serums—known and recognized as such—whose products are as easily obtainable in New York as the one recommended by the committee; and it seems a great injustice to these manufacturers that their serums are not accorded equal recognition by the committee in order that comparisons might be made as to their relative merits.

If but a single make of domestic serum is to be used in this investigation, the results obtained can only be conclusive as to the merits of that particular brand; and although the committee may have reasons for dubbing it a standard preparation, those reasons have not been given to a more or less skeptical public. Not only this, but every physician of experience is fully aware of the wide variation that exists among "standard" products as to quality, strength, purity, and therapeutic activity. This variation is more noticeable in antitoxines and blood serums than in any other class of remedial agents for the simple reason that the art of preparing them is so new and so complex that very few manufacturers have had the necessary experience to enable them to prepare

a perfect or even a reliably "standard" product. This fact was beautifully demonstrated in the competitive tests that were made some time ago with diphtheria antitoxines, when many of the serums fell far short of their pretended strength, and a few were so weak as to be absolutely worthless.

The antistreptococci serum is admittedly one of the most difficult of its class to manufacture; it is the one above all others which is in the balance of public estimation; its immediate fate, at least in the United States, depends very largely upon the report of the investigating committee; and in order that this report may be convincing, and at the same time just and impartial, it seems to me that there are just two ways in which the work can be done. One would be for the committee to recommend the use of the serums of all of the principal manufacturers and let each one stand or fall by its own merits. The other would be, if the committee persists in its "close communion" method, to recommend the use of a serum which is not only "standard," but which is everywhere known, received, and acknowledged as the most excellent of its kind. Of course, I refer to the serum prepared by Dr. Marmorek himself, whose name is as intimately associated with antistreptococci serum as is that of Pasteur with the hydrophobia cure.

In all probability the rank and file of the profession would prefer a report based upon a trial of serums prepared by the various manufacturers; but, being denied this, it is equally probable that a feeling of doubt will remain long after the report has been filed unless the serum used in the investigation shall be that of its originator, Dr. Marmorek, of the Paris Pasteur Institute. "Marmorek's serum" and "antistreptococci serum" are regarded as synonymous terms by a large proportion of the medical profession; and if Marmorek's own preparation is used in the tests to be made, the results will be regarded as conclusive as to the merits of *antistreptococci serum*—and this will not be true if a single serum of any other make is used.

If the present programme is adhered to it will be necessary for the Gynæcological Society to appoint a committee for each manufacturer before final definite conclusions can be reached; and, aside from the great labor and long wait incident to such a course, a great many valuable lives will probably be sacrificed by failure to make timely use of the Marmorek serum in cases of streptococcal infection.

It is to be hoped that the opinions here expressed will not be construed as a reflection upon the New York board of health, whose earnestness and ability as a health board are gladly acknowledged; nor as an attempt at meddling interference with the work of the committee; but will be taken simply as a Western side-light upon a question of vital importance to the profession and the people of the whole country.

GEOFFREY W. COX, M. D.

BLOOD PARASITES OF FROGS.

1 WEST FRANKLIN STREET, BALTIMORE, January 9, 1899.

To the Editor of the *New York Medical Journal*:

SIR: Dr. Langmann's paper on haemosporidia in your issue of last week reminds me of studies on the subject now many years ago. In 1882 (*Clinical and Veterinary*, vol. X, No. 7) I described and figured the trypomastoma and the dropidid, which were very abundant in the blood of the frog in my laboratory. I think other records exist of the presence of the frog in the country.

try; at any rate they are more generally recognized by instructors in histology than the statement in Dr. Langmann's paper would indicate.

WILLIAM OSLER, M. D.

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

Meeting of October 12, 1898.

The President, Dr. WALTER B. JOHNSON, in the Chair.

A Case of Acute Glaucoma.—Dr. HENRY T. OPPENHEIMER reported the following case of glaucoma of the left eye: The patient was a native of Holland, fifty-three years of age. He had always had good health and good eyesight, and he had felt no pain or discomfort in his eyes until three months ago, when he had felt a terrible pain in the left eye, so intense that he had not been able to sleep for five nights. The eye was red and swollen and had remained so for two months. After that it had gradually improved until it had reached its present condition.

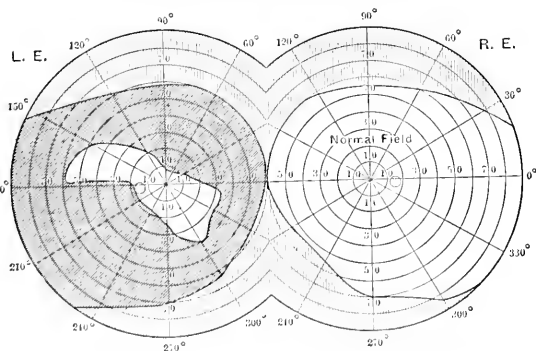
It had been shown, on palpation, that the tension of the left eye was much greater than that of the right eye, and it had felt like a marble under the fingers. The veins on the surface of the sclera were well marked, which was not the case in the healthy eye. The pupil

and restored vision. In this case the conditions were different; the optic nerve had been permanently injured from pressure, and it was doubtful whether an iridectomy would have given any good result. At the time he had seen the patient the pupil was enlarged by atropine, which had been administered by some irresponsible person, and the symptoms had been much aggravated by it. He had used eserine to relieve these symptoms, and if this remedy would lower the tension he would continue to use it and not resort to operation. He presented the case not because of its rarity, but to call attention to the necessity of an accurate diagnosis being made, so as to avoid the mistake of using atropine, which was fatal to a glaucomatous eye, as it immediately increased the tension.

Fibrocyst of the Uterus removed by Abdominal Hysterectomy.—Dr. BROOKS H. WELLS presented the following case: The patient was an unmarried Irish-American, thirty-two years old. She had always had good health, and had first menstruated at the age of fourteen years and a half, and menstruation had been regular and normal. When she was fifteen years old the abdomen was large and hard, and she had been scolded by her mother for "carrying her stomach so high." At this time she had first worn corsets, and had experienced some difficulty in making them fit comfortably over the abdomen. As there had been no pain and she had apparently been well, her condition had attracted no further notice, but the abdomen had always remained prominent.

In May, 1898, she had struck the right side of the abdomen against the corner of a piece of furniture. The blow had been a hard one and had been followed by severe pain, nausea, vomiting, and dizziness. Afterward the abdomen had grown larger and the patient had had continually more or less discomfort, with soreness and throbbing. In July, 1898, Dr. Wells had been asked to examine her, which he had done on the 21st. At that time the abdomen had measured forty inches in circumference and had contained a tense, thin-walled, fluctuating, immovable, rounded tumor which had extended above the umbilicus and had been somewhat more prominent on the right side. The tumor had not been tender and the fluctuating had been very marked. As the patient had objected to a vaginal examination, it had not been made. It had seemed to Dr. Wells that he had to deal with a multilocular cyst of the right ovary, and he had advised its removal by abdominal section.

On September 19th, while sitting, the patient had reached over to pick up a child and had been seized with a sudden and violent pain over the entire abdomen, which had been followed by symptoms of shock. On the 21st the speaker had found her face pale, drawn, and anxious, the pulse about 96 and of high tension, and the abdomen tender, tense, and tympanitic above the tumor. Apprehending rupture of a loculus of the cyst or a twist of its pedicle, he advised an immediate operation, and on the morning of the 26th the abdomen was opened and about three pints of a greenish-brown viscid fluid were found, which had evidently come from the ruptured cyst. Posteriorly and filling the pelvis hard masses of a pinkish-yellow color were found adherent to the sigmoid and upper rectum by dense and very vascular adhesions. When these had



was wider than normal and much longer than that of its fellow. The anterior chamber was shallow and the iris less bright than that of the right eye. The ophthalmoscope had shown the typical cupped appearance of the optic disc with the blood-vessels bending over the edge of the cup and disappearing in its depths. The veins were large, and the arteries pulsed when the slightest pressure was made upon the eyeball.

This was a typical picture of a glaucomatous eye, especially when considered together with the narrowed visual field, as shown in the accompanying chart. The contraction upward and inward was quite characteristic of glaucoma. Dr. Oppenheimer said that if the patient had sought treatment in the beginning of the attack, which was doubtless one of acute glaucoma, he would have done an iridectomy. In acute glaucoma this was the step necessarily indicated, and in the great majority of cases if this was done promptly it checked the attack

been tied off so that the tumor could be lifted up from the abdomen, it was realized that there was a cystic uterus to deal with, and it was removed by a supravaginal amputation. The peritoneal flaps were closed, the abdomen was flushed with sterile normal salt solution and closed, and the patient was put to bed in good condition. Aside from troublesome nausea for thirty-six hours, convalescence had been uneventful. The pulse before the operation had been 84; immediately after, 96; and since then had ranged from 72 to 80. The temperature for the first eight days had ranged between 99° in the morning and from 100° to 101° F. in the evening; after that it had become normal.

Dr. Wells thought that the tumor presented certain peculiarities of interest. When fresh and distended it was of about the size of an adult head; its anterior and superior walls were from an eighth of an inch to a quarter of an inch in thickness; it was of a greenish color, and very soft and friable. The rupture was about two inches and a half in length on the superior surface. The contents were the greenish fluid, already mentioned, and masses of coagulated fibrin. The posterior and inferior walls were thicker, finely nodular, pinkish-yellow, friable, and cheesy in appearance, and were covered with dilated blood-vessels. This appearance was more like sarcoma than fibroid, and had led to a suspicion of malignant degeneration. The microscope, however, had shown it to be a fibroma broken down and in advanced granular degeneration. There had been no histological lining to the cyst walls; it was merely a cavity in a distended mass of myofibromatous tissue.

There were several points of interest to be noted, Dr. Wells thought: Fibroid was very rare in young girls, and in this case there was a history that pointed very strongly to its presence since the age of fifteen. The cause of the cystic degeneration seemed clearly to have been an apoplexy into the interior of the tumor followed by liquefaction of the blood clot and by further degeneration of the tumor walls, until, finally, rupture had occurred. The contents of the cyst had been retained in the abdominal cavity for six days without serious peritoneal irritation. In performing the hysterectomy one ovary had been allowed to remain in order to avert the symptoms attending the artificial menopause. The diagnosis was often, as in this case, obscure, and the growth was usually thought to be a multilocular ovarian cyst until an operation disclosed its true character.

Practical Points in Percentage Feeding.—Dr. WILLIAM L. BAKER read a paper on this subject. (See page 41.)

Book Notices.

A Text-book of Pathology. By ALFRED STENGEL, M. D., Instructor in Clinical Medicine in the University of Pennsylvania, Professor of Clinical Medicine in the Woman's Medical College, Philadelphia, etc. With Three Hundred and Seventy-two Illustrations. Philadelphia: W. B. Saunders, 1898. Pp. 15-818. [Price, \$1.]

COMPLETE text-books on pathology are very novel additions to American medical literature, and the appearance of an entirely new work of comprehensive scope is likely to attract more attention than the publication of a similar treatise on any other branch of medicine.

The first natural inquiry relates to the position which this new treatise aims to secure among similar or related works. Among exactly similar works there are apparently none with which the present volume may be associated. The author has avowedly been guided in his production by the point of view of the clinical pathologist—that is, of the well-read clinician—and has aimed to compile a work with special reference to the needs of the clinician. There are perhaps two main features of the text which are the outcome of this purpose, and which represent probably the chief and special value of this text-book. They are the prominence given to pathological physiology and the separate consideration of the early and late stages of many important lesions. Rather more of the facts of clinical medicine appears also in the discussions of the etiology of disease than is found in many standard works on pathology. Each of these features tends to make the volume especially suitable to the needs of students, and particularly valuable for their instruction. In fact, the author states that the completed work is the outgrowth of lectures prepared for the special instruction of students.

In this domain the author may be congratulated on having produced a very creditable treatise, the compilation of which is a most comprehensive undertaking.

Deserving of special mention is the excellent series of illustrations with which the pages abound. Many of these appear for the first time in a text-book, and the others have been chosen with excellent care and evidently from a sufficiently wide acquaintance with pathological literature.

In another field, in which the supply of text-books produced in English is very limited, the present treatise can not be said to enter into competition with several established works. It is not sufficiently complete or critical to serve as a text-book for general reference, although the intention of the author in this respect is not always clear. What disease usually does, is stated explicitly, but less attention is given to what disease may very often do. A single example may suffice to illustrate the difference in this respect between the present work and a treatise like that of Birch-Hirschfeld or Ziegler. In the paragraph on lymphadenoma of the spleen, the histological changes are described as similar in leucæmia and in pseudo-leucæmia. Yet they may be different in the one disease from the other, or in different cases of the same disease. The splenic enlargement is attributed to hyperplasia of the Malpighian bodies. Yet it may affect the pulp tissue exclusively. Similar comparisons appear throughout the volume, not detracting from its value in a special field, but indicating the natural limitations of a work of this size and character.

Dr. Stengel's treatise should secure recognition, therefore, as a text-book specially adapted to the needs of students and clinicians, but it can not be classed with the original and exhaustive text-books on pathology which represent the best work of modern German, French, and English-speaking pathologists.

Untersuchungen über den Einfluss der Ernährung auf die Histologie der Leber. Von Dr. ALFRED BAYES, Professor der pathologischen Anatomie und Bakteriologie an der Universität zu Bonn. Mit 111 Abbildungen im Text und 18 in der Tafel. Berlin: Springer, 1898. Pp. 111.

THE present work of the author is a monograph on the *Reichs-leber*, and the influence of the various conditions with

which Babes has enriched the literature of the subject, is due to the fact that he was unable, owing to want of space, etc., to treat of them *in extenso* at the lepra conference held in Berlin in 1897. Fortunately was this the case, since to it we owe this valuable treatise, representing the individual work and investigation of the author into every tissue implicated by leprosy.

Beginning with our histological knowledge prior to the discovery of the bacillus, he sketches the investigations of the more prominent leprologists—Virchow, Thoma, Danielssen, and Boeck—and he then takes up the subject of the bacillus, entering into its forms, its staining qualities, and the attempts at cultivating it which have been made. The question of the mode of entrance of the bacillus into the tissues is carefully considered, as well as its cellular site, and then the histological features of leprosy of the skin, eye, larynx, nervous system, genital organs, glands, lungs, digestive tract, etc., receive thorough treatment in separate chapters.

Babes recognizes that the bacillus is the important cause of the symptoms characterizing leprosy, and thinks that the cases in which it is not found are explained by an error in diagnosis or by the fact that the point where they were situated was not examined. He states that the lepra bacillus in its more minute structure is very similar to the tubercle bacillus, but yet distinguishable from it by its reaction to dyes, etc. Especially is the difference between the two shown by the fact that incontestable pure cultures of lepra bacilli and successful inoculations on animals have not yet been made. Babes states that his demonstration of the bacilli on the surface of the skin and in the hair sacs, in the various secretions, and in pus from ulcerations, suggests the possibility of contagion from contact, but yet other conditions are probably necessary. After considering all sides of the question, Babes concludes, however, that it is not possible to determine the paths by which the bacillus penetrates into the system.

These few references to the contents of the monograph are certainly sufficient to show the valuable material which it contains. It should be read eagerly by everybody interested in leprosy from the scientific point of view. A spirit of judicial fairness pervades the book, and one feels that it is the work of an earnest seeker after scientific truth, and not of a bidder for transient notoriety. The illustrations accompanying the publication and demonstrating histological preparations are exquisite. They make one regret deeply that, whether it is on account of the cost or for some other reason, such work can not be done in this country, or at any rate is not.

Ueber Malaria- und andere Blutparasiten nebst Anhang.

Eine wirkliche Methode der Chromatin- und Blutfärbung. Von Dr. HANS ZIEMANN, Marinestabsarzt. Mit 165 farbigen Abbildungen und Photogrammen auf 5 Tafeln und 19 Eideckkurven. Jena: Gustav Fischer, 1898. Pp. v+192.

THIS monograph presents the results of the author's studies of the parasitology of two hundred and fifty-four cases of malarial disease occurring in western Africa, Italy, and Germany, and of the related blood-parasites found in tropical animals, principally birds, and in cattle suffering from "Texas fever." The monograph deserves to rank among the most important of recent contributions to this subject. Its conclusions are based upon a minute study of the morphology of the parasites as demonstrated by a modification of Roman-

novsky's staining method devised by the author. Ziemann's staining fluid is prepared by adding a one-per-cent. watery solution of cosine to a one-per-cent. watery solution of methylene blue, in proportions which vary with the specimens, the age of the solutions, and some other inconstant factors. The results of the method, while very effective in some instances, are so unreliable even in the author's own hands that it is probable that Ziemann will have a monopoly in the use of his method until he can give a more accurate and intelligible description of the technics. Granting that some one else can learn to apply the method successfully in order to verify his results, and granting that his interpretation of the structures demonstrated is correct, Ziemann's conclusions are of interest and importance.

Ziemann has found the æstivo-autumnal parasite in a case of quartan fever, the first recorded instance. His method demonstrates especially the chromatin of the parasite, and he finds in the behavior of the chromatin essential differences in the quartan, tertian, and æstivo-autumnal parasites. He gives three important characteristics which serve to distinguish sterile from fertile parasites. Sterile parasites tend to increase in size; they lose their amœboid motion, although the pigment may show active molecular vibration; and the pigment of sterile forms is superabundant and very coarse-grained.

With the data secured by means of his staining method the author enters into the critical discussion of the parasitology of malaria, and professes to have settled many hitherto obscure points. Whether Ziemann's conclusions are correct or not, his contribution deserves careful perusal by all interested in the full study of these important diseases.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By RICHARD C. CABOT, M. D.

With Colored Plates and Engravings. Third Revised Edition. New York: William Wood & Co., 1898. Pp. xliii+4 to 440.

As compared with the first edition, this work has now received extensive additions and alterations, and is considerably improved in all departments.

The conspicuous additions are a chapter on the serum reaction in typhoid fever, and descriptions of Oliver's tintometer and hemoglobinometer, Müller's blood dust, special tests for diabetic blood, the iodine reaction in suppurative processes, and the changes in the blood of several minor infectious diseases and in various forms of acute poisoning. Less prominent but equally valuable additions to the treatment of the subject of primary and secondary anemias will also be found.

Several photomicrographs are a distinct addition to the illustrations of the work, in which it is still somewhat deficient.

The present volume more than ever furnishes the most exhaustive report of clinical blood examination that has yet appeared in any language. However, no other writer has ever attempted to write just such a work, so that it can not be fairly compared with the more critical works on the clinical pathology of the blood. The writer says he has eliminated what little theoretical discussion existed in previous editions. This would be a matter of regret were it entirely true, but it appears that in some particulars rather more critical

thought has been devoted to certain subjects, to the great advantage of the reader. Critical theoretical discussion is just what the work has always needed in order to make it something more than a compilation, and a real "guide" to the less experienced worker.

The numerous tables of routine blood examinations require condensation and analysis to be of great value, and it does not appear necessary to keep such a book fully abreast with all that is being written on the blood, for much of this is error. It would have been better to omit all mention, for instance, of Neusser's "perinuclear basophilia," described and properly interpreted by Löwit years before Neusser's description appeared. A criticism of the present work often mentioned is a failure to discriminate between authorities, the experienced and the inexperienced being cited often with equal prominence. In a field in which the literature abounds in reports, theories, and conclusions, based on incompetent evidence, it is a function of first importance to guide the reader aright by a careful critical estimate of authorities. It would appear, therefore, that considerable theoretical discussion is required in any work on the blood, especially if it is to stand as a finished scientific production.

BOOKS, ETC., RECEIVED.

A Manual of Physiology. With Practical Exercises. By G. N. Stewart, M. A., D. Sc., M. D. (Edin.), D. P. H. (Camb.), Professor of Physiology in the Western Reserve University, Cleveland, etc. With Numerous Illustrations, including Five Colored Plates. Third Edition. Philadelphia: W. B. Saunders, 1899. Pp. 5 to 848. [Price, \$3.75.]

The Treatment of Wounds: its Principles and Practice, General and Special. By Lewis Stephen Pilcher, A. M., M. D., Late Passed Assistant Surgeon, United States Navy, etc. With One Hundred and Forty-two Wood Engravings. New York: William Wood & Co., 1899. Pp. xiii+453. [Price, \$3.]

Glaucoma: its Symptoms, Varieties, Pathology, and Treatment. By Alexander W. Stirling, M. D., C. M. (Edin.), D. P. H. (Lond.), Late House Surgeon, Royal Westminster Ophthalmic Hospital, etc. With Illustrations from Microphotographs. St. Louis: Jones H. Parker, 1899. Pp. viii+177.

A Syllabus of Materia Medica. Compiled by Warren Coleman, M. D., Instructor in Clinical Medicine and Materia Medica in Cornell University, Medical Department, etc. New York: William Wood & Co., 1899. Pp. vi+169. [Price, \$1.]

The Medical News Pocket Formulary for 1899. By E. Quin Thornton, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. 272. [Price, \$1.50.]

Saunders's Pocket Medical Formulary. With an Appendix containing Posological Table; Formulae and Doses for Hypodermic Medication; Poisons and their Antidotes; Diameters of the Female Pelvis and Fetal Head; Obstetrical Table; Diet List for Various Diseases; Materials and Drugs used in Antiseptic Surgery; Treatment of Asphyxia from Drowning; Surgical Remembrances; Tables of Incompatibles; Eruptive Fevers; Weights and Measures, etc. By William M. Powell, M. D., Member of the Philadelphia Pathological Society, etc. Fifth Edition, thoroughly revised. Philadelphia: W. B. Saunders, 1899. Pp. 290. [Price, \$1.75.]

Das Weib in seiner geschlechtlichen Eigenart. Nach einem in Göttingen gehaltenen Vortrage. Von Dr. Max Runge, ord. Professor der Geburtshilfe u. Gynäkologie, etc. Dritte neubearbeitete Auflage. Berlin: Julius Springer, 1898. Pp. ix+39.

Die Einschränkung des Bauchschnitts durch die vaginale Laparotomie (Kölpoceiotomia anterior). Von Professor Dr. A. Dührssen, in Berlin. Mit 7 Abbildungen und 6 Tabellen. Berlin: S. Karger, 1899. Pp. 266.

Die Fremdkörper des Uterus. Zusammenstellung von 550 Beobachtungen aus der Literatur und Praxis. Von Dr. Franz L. Neugebauer, Vorstand der gynäkologischen Klinik des Evang. Hospitals in Warschau. Zweite Ausgabe. Berlin: S. Karger, 1899. Pp. 144.

Essai de sérumthérapie antituberculeuse (méthode Maragliano). Faits à la clinique médicale de l'Université de Genève. Par le Dr. G. Zanoni. Genève: Paul Dubois, 1898. Pp. 7 to 168.

Die gestielten Anlänge des Ligamentum Latum. Von Doct. Dr. Emil Rosta, in Graz. Mit zwei lithogr. Tafeln. Berlin: S. Karger, 1899. Pp. 54.

New York Charities Directory. A Classified and Descriptive Directory to the Philanthropic, Educational, and Religious Resources of the City of New York, including the Boroughs of Manhattan, the Bronx, Brooklyn, Queens, Richmond. Ninth Edition. New York: The Charity Organization Society, 1899. Pp. xxiv+744. [Price, \$1.]

Transactions of the Royal Academy of Medicine in Ireland. Volume XVI.

The Forty-fifth Annual Report of the New York Infirmary for Women and Children.

The Annual Report of A. H. Doty, Health Officer, Port of New York. For the Year 1897.

The Thirty-first Annual Report of the Managers of the Hudson River State Hospital at Poughkeepsie, N. Y., to the State Commissioner in Lunacy. For the Year ending September 30, 1897.

Report of the Board of Trustees of the Upper Peninsula Hospital for the Insane for the Period ending June 30, 1898.

The Eighth Annual Report of the Eye, Ear, Nose, and Throat Hospital, of New Orleans. January 1, 1897, to December 31, 1897.

Consumption: Cases that should go to Colorado and Cases that should Stay at Home. By George L. Richards, M. D., of Fall River, Massachusetts.

Perichondritis of the Larynx. By George L. Richards, M. D. [Reprinted from the *Philadelphia Medical Journal*.]

Miscellany.

What Shall the Physician say to a Gonorrhœal Patient who wishes to Marry? Kronmayer (*Munchener medizinische Wochenschrift*, No. 24; *International Medical Magazine*, December) sums up the question as follows:

If the presence of Neusser's gonococcus is demonstrated, the physician's duty is clear and needs no elucidation. But, if the bacteriologic examination is negative, his answer should cover the following points:

As a negative bacteriologic examination is not an absolute proof of the absence of gonococci, it is the patient's first duty to make persistent and strenuous effort

to rid himself of the gonorrhœa or chronic inflammation of the urethra by a systematic course of specific treatment. This is not to be neglected even in cases where the examination has for a long time repeatedly failed to detect gonocœci.

If a complete cure is found impossible, or if the patient refuses to subject himself to further treatment, the physician should explain the case under its various aspects, and leave the decision with the patient. In no case is the physician to assume the responsibility of the gonorrhœa not becoming infectious.

If the patient decides to marry, the physician should impress upon him the fact that he is still capable of giving the infection, and must, therefore, observe the following rules in sexual intercourse:

1. Urinate immediately before sexual congress to expel any secretion that may have accumulated in the urethra.

2. Avoid as much as possible having intercourse oftener than once a day.

3. Never perform the act twice in succession, because, if the first seminal discharge contains gonocœci, the friction attending the second coitus brings them into closer contact with the urethra and cervix, thereby increasing the danger of infection.

If this rule is disregarded, and the act is performed more than once in twenty-four hours, the vagina should be thoroughly flushed out with a vaginal douche, which should, in general, be employed as often as possible.

The Toxicity of Appendicular Inflammation.—M. Dienlaffoy (*Revue du praticien*, December 15th) draws at the end of a lengthy paper, presented to the French Academy of Medicine, the following conclusions: 1. The toxicity of appendicular inflammation is confirmed both clinically and by laboratory investigation. 2. This toxicity may be slight, intense, or even mortal. 3. In the more benign and more common form the toxicity displays itself by a subicteric tint with urobilinuria and albuminuria. 4. The icteric tint, indicating affection of the liver, is sometimes significant of an extremely grave intoxication attacking the nervous system and showing itself by symptoms of cerebral, bulbar, or typhoid type. 5. The sole means of warding off attacks of appendicular inflammation is the suppression of the infective focus. 6. Given a correct diagnosis and early operation *secundum artem*, accidents may be warded off. 7. A death from appendicular inflammation ought never to occur.

Gumma of the Tongue without other Specific Symptoms.—Dr. William S. Gottheil (*International Medical Magazine*, December) records the case of Mary H., American, twenty-four years old, who came to his clinic on April 15, 1898, complaining of a sore tongue. Examination showed the presence of a large elongated tumor occupying the central area of the anterior part of the organ, and measuring an inch and a half in length by three quarters of an inch in breadth. The edges and base of the tumor were moderately hard and infiltrated, but there was no characteristic sclerosis. The central part of the tumor was occupied by a ragged, deep, longitudinal ulceration, covered apparently with florid granulation. The submaxillary glands were moderately swollen and quite hard. The tumor had commenced a small lump deep in the tongue eight weeks before, and was steadily getting larger. The exact time at which ulceration had begun could not be determined; in fact, the patient attached very little

importance to that feature of the affection; there was no history of a sudden rupture, as of an abscess. There was absolutely no pain connected with the affection, and the patient complained only of the discomfort and inconvenience caused by the presence of the tumor in her mouth.

No evidences of past or present syphilis were found anywhere, and this, with the age of the patient, her robust health, and the fact that she was a modest girl, had been recently married to an apparently healthy husband, and was pregnant, seemed to exclude tertiary syphilis. No stress was laid upon the history, more especially in the case of a woman; but as a matter of fact that was entirely negative. Cancer could be excluded from her age and sex. Primary tuberculosis was excluded from the appearance and course of the ulceration, and the normal condition of her lungs, larynx, and general system. The diagnosis lay between an ulcerated initial lesion and a softened gumma, with the chances apparently greatly in favor of the former.

The patient was therefore given a placebo and kept under observation. Both the tumor and the ulceration increased slowly but steadily in size. On May 4th the mass had become somewhat softer. It was then the eleventh week after the appearance of the tumor, and not a single secondary manifestation had shown itself. The diagnosis of gumma was then made, and the results of treatment rapidly proved its correctness. Under moderate doses (ninety grains daily) of the iodide of potassium, conjoined with small doses of mercury, the tumor rapidly decreased in size; the ulceration healed up; and three weeks later, when the patient withdrew from observation, there was hardly a trace to be felt in the tongue of the original induration, and the tumefied glands were reduced to one half their former size.

The interesting point in the case, says the author, apart from the comparative rarity of the affection, is the presence of a tertiary lesion in a patient so young and presenting not the slightest evidence of luetic infection. It is an additional argument, if one were needed, of the absolute necessity of making the diagnosis in syphilis, as in ordinary dermal affections, from the objective symptoms alone, and absolutely disregarding the anamnesis.

Antitoxic Relation between Bee Poison and Honey (?).—Dr. G. H. Stover (*Johns Hopkins Hospital Bulletin*, November) says that Miss M., aged thirty-five, single, consulted him on September 9, 1895, on account of the rather unusual swelling of her right cheek following a bee sting received some days before; the whole right side of the face was considerably swollen and she felt some constitutional symptoms. After treatment for five days she recovered, and on her final visit made the interesting statement that, while in the past she had never been able to eat honey and was, indeed, nauseated by even the smell of it, since being stung she had developed a craving for it, and found that she could eat it with complete satisfaction and with no ill results.

The author asks: Will some of the immunization experimenters throw light on this occurrence?

The Indications for the Employment of Hydrochloric Acid in Affections of the Stomach.—In his Lyons thesis of 1898, according to the *International Medical Magazine* for December, Perran says that, although hydrochloric acid is already old as a therapeutic remedy for diseases of the stomach, authors are still far from agreeing on the cases in which it should be em-

ployed, and, above all, as to the quantity of the drug to be employed. Indeed, while certain clinicians prescribe from fifteen to thirty minims per day, others administer much larger doses. In the work on this thesis Perran describes the favorable effects produced by large doses of hydrochloric acid taken according to the method employed with success by Dr. C. Tournier in his private practice, as also by Dr. Lépine, of Lyons. Dr. Tournier gives hydrochloric acid in the French official dose of from three to four grammes (forty-five minims to one drachm) daily in the following manner: the patient takes fifteen drops of the acid a few minutes after finishing each of the two principal meals, then at the end of half an hour he takes another fifteen drops, and lastly, in certain cases, he again takes fifteen drops after an interval of thirty minutes. This method of taking hydrochloric acid is about the same as that employed by Dr. Ewald, who prescribes fifteen drops of the acid three or four times at quarter-hour intervals. However, the hydrochloric acid of the German pharmacopoeia contains twenty-five per cent. of the gaseous acid, while that of the French pharmacopoeia contains about thirty-five per cent. Tournier therefore employs a larger dose than Ewald. Thus administered the hydrochloric acid would be tolerated and its use prolonged without inconvenience for several months. This medication is indicated in gastric hypochloridia in general, and especially in henteric diarrhoea accompanied by extreme hypoauidity of the contents of the stomach. These patients have very slightly accentuated gastric disorders. One observes neither palpitation nor swelling, neither pain nor flatulence. Gastric movements are preserved and even exaggerated, and the chemical analysis alone shows that the fault lies in a lack of acid in the contents of the stomach. But there is always a henteric diarrhoea occurring generally after each meal, and this disappears in four or five days under the influence of the acid treatment, although it may have resisted all other remedies. A second group of cases, where the use of large doses of hydrochloric acid produces good results, is found in certain gastric conditions with functional hypochloridia, which may be observed in neurasthenic patients, and shows itself especially in alimentary vomitings with no burning sensations and unaccompanied by soreness. The use of hydrochloric acid in these cases does not fail to control these vomitings. Lastly, this drug is especially useful in cases of gastric catarrh with hypochloridia of alcoholic origin, when the troubles consist more especially of alimentary vomitings, distention, sensation of weight after meals, insomnia, and loss of appetite. The conditions which might constitute a formal contraindication to the use of hydrochloric acid are those in which the gastric troubles are accompanied by a pronounced hyperaesthesia of the mucous membrane of the stomach for all acids. It is easy to understand the favorable influence exercised by hydrochloric acid in cases of gastric catarrh in conjunction with hypoauidity; indeed, physiology teaches us that this acid favors the secretion of the gastric juice, the emptying of the stomach, and the disappearance of mucus; further, that it acts as an antiseptic; and lastly, that it is an excitant of the pancreatic secretion. It is, above all, this last property which Tournier invokes in order to explain the curative action of hydrochloric acid in cases of henteric diarrhoea.

The Effect of Aniline upon the Bladder. Prof. Dr. Rehn (*Lancet*, December 17th), at the German Surgical Congress, described some cases of growths of the blad-

der occurring in workmen employed in chemical factories, especially those where fuchsin is made. He expressed his opinion that the vapors developed in the manufacture of fuchsin produced an irritation of the uropoietic system which finally led to the formation of malignant growths. Dr. Leichtenstern, chief physician to the Cologne General Hospital, writing in the *Deutsche medizinische Wochenschrift*, states that long ago he also observed urinary troubles in these workmen, especially in the form of strangury and haematuria. He refers to similar observations made by Dr. Grandhomme, of Hoechst, Dr. Stark, of Cologne, and Dr. Bachfeld. Aniline and toluidine are especially liable to produce irritation of the bladder. The patients in question were employed in the so-called reduction department of the factory, where nitrobenzol is converted into aniline, amidotoluol converted into toluidine, and fuchsin produced from those two compounds. In this department, therefore, the workmen run great risks, and prophylactic measures should be taken. Free ventilation is essential in order that they may not be exposed to the influence of concentrated vapors of the above substances. They should be instructed to give immediate notice to the medical officers whenever any urinary troubles occur, and men suffering from a disease of the uropoietic system ought not to be employed in aniline works. Dr. Leichtenstern in conclusion described two cases of tumors of the bladder lately observed by him in workmen from a well-known Rhinish chemical factory. The first patient was a man, thirty-one years of age, suffering from symptoms of chronic aniline poisoning—yellow-green color of the hair and nails, together with anæmia. He had also for several weeks complained of anorexia and strangury. By rectal palpation a globular and very painful tumor was recognized in the bladder. The bladder itself was so small that only seventy cubic centimetres (two ounces and a half) of fluid could be injected by irrigation. The daily quantity of urine was from five hundred cubic centimetres to seven hundred and fifty cubic centimetres (seventeen fluid ounces to twenty-seven fluid ounces); it was of a dark-green color and contained a small quantity of blood. Casts were never present and the reaction was acid. In course of time other tumors formed in the bladder and could be felt on both sides of the symphysis, while the capacity of the bladder decreased so much that it would hold only forty cubic centimetres (an ounce and a half) of fluid. The treatment consisted of hot poulticing, hot baths, opium suppositories, and subcutaneous injections of morphia, the effect of which was that the patient gradually improved, the capacity of the bladder increased, the urine became normal, and the tumors disappeared. After six weeks the man was able to leave the hospital with only a slight degree of anorexia and strangury. From this rapid recovery it was evident that the growths were not malignant, but that they were due to acute submucous proliferating cystitis. The second patient unfortunately died. He was fifty-one years of age, had been employed for many years in the factory, and went to the hospital with nearly the same symptoms as those in the preceding case, but the tumors were much larger and were perceptible above the symphysis. A cysto-cop was impossible, for the cavity of the bladder was practically obliterated, and the catheter could not make its way to the base of the tumors. Notwithstanding treatment, as above described, the growths increased and a cystostomy was therefore performed. The bladder appeared to be changed into a great mass of growths and was completely removed, the

ureters being brought out into the wound. The patient died two days afterward. The necropsy showed that the tumors were reticular polymorphous sarcomata and had grown through the submucous tissue. The cause of the disease was evidently a chronic irritation of the bladder caused by the vapor of aniline, its pathogenesis being comparable to that of the sarcoma affecting chimney sweeps and workers with paraffin.

A Green Color as Indicative of Gangrene of the Intestine.—Begoïn (*Centralblatt für Chirurgie*, December 2d; *Journal of the American Medical Association*, December 31st) states that he found an eight-day incarcerated loop a "fine green Florentine bronze color" at the herniotomy. The loop was not reduced and the patient died four hours later, when tests of the green portion proved that it was not gangrenous. The portion of the intestine was filled with water at a strong pressure, and only an apparently sound part split. He also states that the intestine can be colored green with bile alone, and that a light-green color does not necessarily imply any alteration in the intestinal wall. A yellow-green, dark, black, or bottle-green are of worse significance, but at the same time they do not necessarily indicate a serious deterioration in the intestinal wall.

The Yukon College of Physicians and Surgeons.—According to the *Canadian Journal of Medicine and Surgery* for January, the establishment of a Yukon College of Physicians and Surgeons, and the election of a council for the same, have taken place. There were some twenty-five Canadian practitioners in Dawson and vicinity, and a number of American physicians who were practising in spite of the Northwest Territories' ordinance. The Canadians found it necessary to incorporate themselves into a legal body for the purpose of protection and mutual help.

At the election held on the 5th of October, 1898, the following gentlemen were elected members of the Council of the College of Physicians and Surgeons of the Yukon Territory: President, E. D. Dunn; vice-president, R. R. Macfarlane; registrar, A. F. Edwards; and J. W. Good and H. H. Hurdman.

The first examination was announced for October 15, 1898, and the following examiners were appointed: Surgery, J. W. Good and E. L. Barratt; medicine, R. R. Macfarlane and E. G. Scott; midwifery and gynaecology, E. P. Thompson and W. G. Hepworth; medical jurisprudence and sanitary science, J. A. Sutherland and W. A. Richardson.

Since the ordinance assented to by the executive council, an amendment has been added which allows all *bona fide* medical practitioners, practising in the Yukon Territory at the date of the establishment of the College of Physicians and Surgeons, who were able to produce certificates of having attended a medical college for three years and a diploma of qualification from the same, to be eligible for admission to the College of Physicians and Surgeons upon passing an examination and paying one hundred dollars to the registrar. This amendment holds good only until the close of the first examination.

As it now stands the regulation with reference to the practice of medicine in the Yukon Territory is, in brief, that (1) licentiates of Quebec, Manitoba, and the Northwest Territories are eligible to practise medicine in the Yukon Territory on the presentation of their licenses and the payment of a fee of one hundred dollars. (2) Those who can present certificates of attendance for four years,

or a diploma of qualification from a recognized school of medicine, are eligible to practise in the Yukon Territory upon passing the examination of the medical council of the territory and the payment of one hundred dollars to the registrar.

Deaths of Eminent British Physicians.—We learn from the *British Medical Journal* for December 24th that Dr. A. A. Kanthack, professor of pathology in the University of Cambridge, England, died on December 21st. The deaths are also announced in the same journal of Dr. Munn, Harveian Librarian of the Royal College of Physicians of London, and the compiler of the *Roll of the Royal College of Physicians of London*, a work of great historical and antiquarian value as well as of Dr. Charles John Hare, consulting physician to University College Hospital, London.

Plague in Madagascar.—According to the *Journal des sciences médicales de Lille* for December 17th, a dispatch from Tamatave announces the outbreak of a disease seemingly identical with the bubonic plague of the Orient. The origin of the epidemic can not be ascertained, but examination of the buboes has revealed the presence of the bacillus of Yersin.

The Acquittal of the Christian Scientists in the Frederic Case.—The *British Medical Journal* for December 24th says:

"So far as the law courts are concerned, the last word has been said as to the circumstances attending the last illness and death of Mr. Harold Frederic; and very unsatisfactory (to the public) that last word is. The coroner's jury, it will be remembered, returned a verdict of manslaughter against the two ladies, Miss Kate Lyon, who lived with him at Kenley, and appears to have had charge of his establishment there and to have assumed the general charge and control of the patient throughout his last illness, and Mrs. Mills, the Christian Scientist "healer," who was called in by Miss Lyon. The treasury took up the case, and after a full inquiry extending over several days before the Croydon justices withdrew the charge against Miss Lyon, having come to the conclusion that no jury would convict her, but asked for a committal against Mrs. Mills. The magistrates, however, were of opinion that the evidence against Mrs. Mills was not sufficient to justify them in sending her for trial, and they therefore discharged her also, stating that they came to this decision with the less difficulty because the defendants would necessarily be indicted on the coroner's inquisition, upon which the treasury could obtain the decision of the higher court, so that justice could in no sense be defeated by the refusal of the magistrates to commit for trial. When, however, the case came before the Central Criminal Court in due course last week, counsel for the crown announced that, after consulting with the attorney-general, he did not propose to offer any evidence against either of the defendants. Mr. Justice Hawkins, the presiding judge, directed the jury that under these circumstances they had no alternative but to return a verdict of not guilty, as no evidence was before them on which any other verdict was possible. But the learned judge pointed out that he was not responsible for the withdrawal of the charge, and emphatically declined even to share the responsibility in any degree with the crown. From some cause not explained it seems that no copy of the depositions taken before the coroner or magistrates had been sent to the judge. The judge said he would have

read the depositions if they had been sent to him, and might then have assented to the course proposed by the crown or might not have assented. Those who know Mr. Justice Hawkins will feel pretty confident that in a case of such great public interest he would have stated his reasons for assenting or dissenting, and in doing so would have thrown some much-needed light upon the law and its relation to the facts of this case.

"As we said in a previous notice of this case, 'the point on which an authoritative deliverance is required is how far it is lawful for those about a sick person, presumed to be incapable of forming an intelligent judgment for himself, to neglect ordinary medical treatment, and rely solely on "faith healing." As no statute deals with the case of adults in general over sixteen years of age, the question can only be answered by reference to the principles of the common law, and these principles do not appear to recognize any positive legal duty on the part of any person to supply medical aid or medicines to a sick adult unless that person has in fact the charge and control of the patient for the time being, and the patient is in fact incapable of taking care of himself. In such circumstances the common law holds the person responsible for procuring whatever is necessary for the patient—food, clothing, fire, etc.—and it would be a question for the jury to say whether, in the particular circumstances of the case before them, medical aid and medicines could reasonably be considered necessities. If this was answered in the affirmative, there would be the further question, Why were they not supplied?"

"On this point Mr. Justice Wills, in his charge to the jury in the case of Senior, which we noticed last week, directed the jury that 'in order to make out a case of manslaughter by negligence of this kind, purely at common law, the negligence must be gross and wanton; so much so as to indicate something, at all events, of an evil mind, and that it was impossible to say that of the prisoner, who was shown to have spared neither expense nor care, and to have taken in all respects but one (namely, the procuring of medical aid and medicines) every precaution to do the best for the child.'"

"For his failure to provide medical aid and medicines Senior was sentenced to four months' imprisonment with hard labor. But it is clear that under the common law Senior could not have been convicted of criminal neglect, and the statute under which he was convicted is expressly limited to patients under sixteen years of age. But had there been a similar provision applicable to adults the case against Miss Lyon would have been narrowed down to the question, Was Mr. Harold Frederic capable of taking care of himself? Whether such a provision would be desirable in the interests of the public, and whether if desirable the legislature could ever be persuaded to enact it, are delicate questions which we can not discuss at present."

The American Medico-Surgical Bulletin. We learn from the December issue of this journal that it has been acquired by Messrs. Merck & Co., of New York, who will discontinue its publication with that number, and will publish in its place Merck's *Archives of the Materia Medica and its Uses*.

Christian Science vs. Law.—The *New York Times* for January 6th contains the following admirable remarks by Dr. Frank S. Billings:

"It seems the Court of Common Pleas in Ohio de-

cides that the Christian Science healer has not the responsibility in regard to the treatment of the sick that the law imposes on all other practitioners of medicine, regular and irregular. The learned judge of this court in Cincinnati holds that the rites she (the Christian Science healer) performed were religious and not medical, and therefore not within the State medical law, under which she was prosecuted. It is unfortunate that one can not tell whether the legal objections were simply a technical evasion of the law so disgracefully common in this country, or that the law did not cover the case in point. From the general character of the case in question and the remarks of the judge there seems no doubt that the Christian Scientist would have been guilty of malpractice leading to death—in plain English, professional murder—had she been either an ordinary charlatan or a regular medical practitioner. She escaped because 'the court holds that the rites (practice) she performed were religious and not medical.' This decision is based on the law guaranteeing the free right to religious opinions, but the learned judge seems to be entirely unaware that that law has reference to opinions, to theories, as to the existence of God alone, and in reality has no reference to rites or actions, which is an entirely different question. Under our laws a Hindu could come to this country and freely utter the principles of his religion and perform many of its rites, but would our law protecting 'freedom of religion' permit the widow of such a Hindu to ascend the funeral pyre of her husband and sacrifice herself through one of the holiest rites and moral obligations of her religion? Suppose the Christian Scientists, or some other new sect, should claim to be 'Abrahamites' and that child sacrifice was their holiest rite (it is quite possible; nothing in this line seems too absurd to flourish in this country of free and glorious license to ignorance), and put it in practice, would that not be a religious rite according to the learned judge of Cincinnati? Such absurdities as that are exactly similar to the rites of the Christian Scientists. They come under criminal, and not civil, law. Here is one of the richest of several cases that have come to my knowledge: Mrs. — was the pretty young wife of a clerk. Her mother was a maniacal Christian Scientist. When it came time for Mrs. — to be confined the husband was told he might go to his business, and the mother (mother-in-law) took the case in hand, aided by a Christian Scientist healer. The poor girl began to suffer, and the fool woman put a Bible on her abdomen and told her that her pains were all resignation, that the Lord never gave people pain, and so on, *ad nauseam*. The agonies of that poor child must have been terrible, for neighbors heard her screaming and begging for a physician, but these Christians would never let her. Finally the pain stopped; no further screaming was heard. The reason was that the child had ruptured the womb and was in the abdominal cavity of the mother. Then there was rushing in mad haste. The husband was sent for; the physician was sent for; but too late; the woman died of hemorrhage and the child died of death. 'Two murders.' But were these women murderers? Not a bit of it. Public sentiment was against them, of course, and no official dared to run a law suit. It was God's will to take his dear one, that was it, and the scientist and a Christian Scientist are the *culprits*."

Plague in England.—According to the *British Medical Journal* for December 11th, the *Red Cross Society of Bombay*, on its arrival from Calcutta at Plymouth,

England, on December 24th, had on board a patient suffering from plague. He was landed and isolated.

The Medical Department of Kentucky University.—The annual session began on January 2d. On December 31st the following-named gentlemen, formerly professors in the Kentucky School of Medicine, were elected full professors in Kentucky University of their respective departments: Dr. J. B. Marvin, professor of the principles and practice of medicine and clinical medicine; Dr. J. M. Holloway, professor of surgery and clinical surgery; Dr. C. W. Kelly, professor of anatomy; and Dr. S. E. Woody, professor of chemistry and diseases of children. On January 1st the university celebrated the one hundredth anniversary of its foundation. It was originally Transylvania University.

A Proposed Provincial Bacteriological Laboratory for New Brunswick.—The *Maritime Medical News* for December states that a movement is on foot to bring about the establishment of a provincial bacteriological laboratory, under the care of a competent bacteriologist, for the province of New Brunswick. The provincial board of health has had the matter under consideration for some time, and has urged the local government to make provision for the salary of the bacteriologist in charge. It is proposed that every physician in the province shall command, *without charge*, the services of the bacteriologist for the early diagnosis of diphtheria and typhoid fever. Should the laboratory be established, it is expected that a small fee will be charged for sputum examinations and for tumor cuttings.

The *News* expresses the hope that the entire profession in New Brunswick will unite in support of the provincial board of health in its effort to secure the establishment of such an important and necessary adjunct to the practice of medicine, and such a valuable means of preserving the public health.

The Charcot Statue.—On December 4th, according to *Lyon médical* for December 18th, the statue of the late Professor Charcot was inaugurated at the Salpêtrière. Remarks were made by M. Brouardel (the president of the committee), the president of the Paris municipal council, Professor Raymond, Professor Cornil, and the minister of public instruction.

The Society of Medical Jurisprudence.—The special order for the last regular meeting, on Monday evening, January 9th, was a paper by the president, S. B. Livingston, Esq., on Citizenship and the Age of Maturity. The society's annual dinner will take place at the Waldorf-Astoria on February 18th.

Lectures on Teratology and Antenatal Pathology in the University of Edinburgh.—On the recommendation of the medical faculty and senatus of the University of Edinburgh, and with the permission of the university court, Dr. J. W. Ballantyne, lecturer on midwifery and gynecology in the Medical College for Women, Minto House, will deliver a series of six lectures on teratology and antenatal pathology within the university (new medical buildings). The lectures, which are free to the members of the medical profession, will be given in the medical jurisprudence class room, at 5 o'clock p. m., on consecutive Fridays in February and March, 1899. The following is a syllabus of the lectures: Lecture I, February 3d: The scope, interest, and importance of antenatal pathology, including teratology, and its relation to

neonatal and postnatal pathology and to the other branches of biological and medical science. Lecture II, February 10th: The pathology of the fetus; fetal diseases as influenced by the intra-uterine environment, the placental factor, and the embryonic factor; diagnosis. Lecture III, February 17th: The pathology of the embryo; teratology; embryonic malformations and monstrosities as influenced by embryonic physiology, the amniotic factor, and the germinal, or pre-embryonic, factor; classification and diagnosis. Lecture IV, February 24th: Teratogenesis, or the causes of monstrosities and malformations; the ultimate causes and the mode of action of the causes of teratological phenomena; experimental teratology. Lecture V, March 3d: The pathology of the germ; diploteratology; the intraconceptional factor in teratology; the preconceptional factor, or the heredity of diseases and deformities. Lecture VI, March 10th: Antenatal therapeutics; possibilities and probabilities; the problems to be solved; fetal, embryonic, and germinal therapeutics.

The Hospital for Scarlet Fever and Diphtheria.—The board of governors consists of Dr. John Winters Brannan (president), Dr. T. Mitchell Prudden (vice-president), Mr. George F. Crane (treasurer), Mr. Paul Tuckerman (secretary), Mr. James J. Higginson, Mrs. John W. Minturn, Dr. Alvah H. Doty, Dr. Hermann M. Biggs, and the president and the commissioner of the city board of health (*ex officio*). The consulting physicians are Dr. E. G. Janeway, Dr. A. Jacobi, Dr. W. H. Draper, Dr. R. H. Derby, Dr. F. P. Kinnicutt, Dr. A. A. Smith, Dr. J. W. Brannan, Dr. Gorham Bacon (otologist), and Dr. H. Holbrook Curtis (laryngologist). The visiting physicians are Dr. W. H. Katzenbach, Dr. Floyd M. Crandall, Dr. W. K. Draper, Dr. R. J. Carlisle, Dr. Egbert Le Fevre, and Dr. Thomas S. Southworth. The hospital is situated at the foot of East Sixteenth Street, facing the East River. It is intended for pay patients. There are two separate pavilions, entirely independent of each other, one for scarlet fever and one for diphtheria. Each pavilion is equipped with its own physician, staff of nurses, servants, etc. There are no wards. Each patient has his own private room. The hospital is a private corporation, controlled by its own board of governors, and is not connected with any other institution. The charges for rooms, including nursing and the services of the resident physician, are thirty dollars a week, payable weekly in advance. If the services of the visiting physicians are required, their charges will be in addition. Patients may be attended by their own physicians, if it is so desired. Children may be accompanied by their mothers. Patients intended for the hospital must not be removed from their apartments until the resident physician has been notified (telephone call, 2880 Eighteenth Street) and the requirements of the board of health have been complied with. The hospital has its own ambulance and coupé service.

The Death of Professor Laboulbène is announced in the *Journal des praticiens* for December 24th as having recently taken place.

The Tenth Congress of Alienists and Neurologists.—According to the *Nouveau Montpellier médical* for December 18th, the tenth Congress of Alienists and Neurologists will take place at Marseilles on April 4th of this year under the presidency of Dr. Dauteronde, chief physician and director of the Asile de Blois.

Original Communications.

FURTHER OBSERVATIONS ON COXA VARA,
WITH PARTICULAR REFERENCE
TO ITS ETIOLOGY AND TREATMENT.*

By ROYAL WHITMAN, M. D.

SINCE the publication of my former paper on this subject, four years ago,[†] the meagre literature has been considerably enlarged, and the somewhat cumbersome term, bending of the neck of the femur, has been displaced, at the suggestion of Hofmeister, by the shorter if less definite one of coxa vara.[‡]

During this time twenty-two additional cases have come under my observation, some of which present peculiarities worthy of attention in their bearing on the etiology and the treatment of the affection.

Coxa vara is, in brief, a depression of the neck of the femur, in most instances following the line of the least resistance, downward and backward, but occasionally directly downward, or even downward and forward. It is one of the group of deformities of the lower extremity due to inherent or acquired weakness of structure or to disproportionate strain, or both, in which knock-knee, bowleg, and the weak foot may be included. The effect of the deformity may be explained by the change in the anatomical relation of the parts involved, and its symptoms are such as might be expected as a result of the progressive transformation of the internal structure of the weakened part, and of the sympathetic and accommodative changes in the joint and in the surrounding muscles.

Coxa vara is of particular interest and importance because it has been, until very recently, entirely overlooked, and because it has been and still is very generally mistaken for tuberculous disease of the hip joint. Indeed it is, apparently, to such a mistake that we owe the identification of the affection.

Bowleg and knock-knee are self-evident, but this deformity of the hip is concealed from view, and in the early stage it is somewhat difficult to diagnose, unless one is familiar with its characteristics, and is experienced in the details of physical examination.

Other deformities of this class are not only self-evident, but they commonly appear and are treated in early childhood, when the cause of the weakness of the bones, general rachitis, is apparent also. Coxa vara is not often an affection of this period of life, or, if

least, the symptoms are latent until later childhood or adolescence, when it usually develops as an isolated deformity of one or both hips, in many instances in patients who present no other evidence of weakness or disease. Finally, in the simple distortions of the legs, the deformity is of greater importance than the discomfort or disability that it causes; but in coxa vara the depression of the neck of the femur entails a partial displacement or disarrangement of the components of the joint that may cause disability out of proportion to the apparent deformity.

The characteristic symptoms and the effects of coxa vara are explained by the deformity, and the diagnosis can be made only by the physical examination. Thus it seems proper to describe the peculiarities of the affection before considering its pathology or possible causes. In the normal subject the neck of the femur projects upward, inward, and slightly forward, forming an angle with the shaft of from one hundred and twenty-five to one hundred and thirty degrees. This allows for the abduction of the thigh and for the proper leverage of the muscles attached about the greater trochanter. If, then, the neck becomes depressed to a notable degree—for example, to a right angle—the range of abduction will be restricted, because the neck of the bone will come into contact with the upper border of the acetabulum. If the neck is, at the same time, forced backward, the shaft will be rotated outward and the range of inversion of the limb will be diminished. The effect of the deformity in restricting the other movements of the joint is less direct. Extension remains unaffected, or its range may be increased even; flexion is limited by the abnormal tension on the capsule, because extreme flexion would throw the displaced head out of the acetabulum. For the same reason flexion increases the inward and outward rotation of the limb.

If, on the other hand, the neck is displaced forward, extension and eversion may be limited, while flexion and inversion are unrestricted. The deformity, in the restriction of motion are misused, primarily, to the distortion of the bone and by tension on the capsule, but their effects are exaggerated by the accommodative shortening of the muscles and, in some instances, by active spasm and contraction. Thus, the active shortening of the limb, corresponding to the depression of the trochanter, may be but half an inch, but the distance more than an inch over the elevated trochanter. In the latter instance the a quo ante position of the limb, the abduction of the limb and the rotation of the limb, the tilting of the pelvis, and the position of the trunk, the equality of the limbs, and the position of the feet, are depressed. The head of the femur is displaced, the locomotion is extremely painful, and the patient is disabled. It is caused, in proportion to the degree of the contraction of the adductors, by a weakness of the muscles of the progress of the deformity. It is caused, in proportion to the degree of the contraction of the adductors, by a weakness of the muscles of the progress of the deformity.

* Read by title before the American Orthopaedic Association at Boston, May, 1898.

† *New York Medical Journal*, June 22, 1894. *Orthopedic*, 1894, 1, 100; *ibid.*, vii.

‡ *Redgrave on the Hip*, Ed. vii, 1894. The most recent articles are those of Hofmeister, *Redgrave on the Hip*, Ed. vii, 1894; *Fraser, Annals of Surgery*, July, 1898; and *Albrey, Ztsch. f. orthoped. Chir.*, Ed. vi, H. 1, 1898.

In fact, unilateral coxa vara, during the progressive stage, corresponds, in its symptoms and physical signs, so closely to fracture of the neck of the femur during

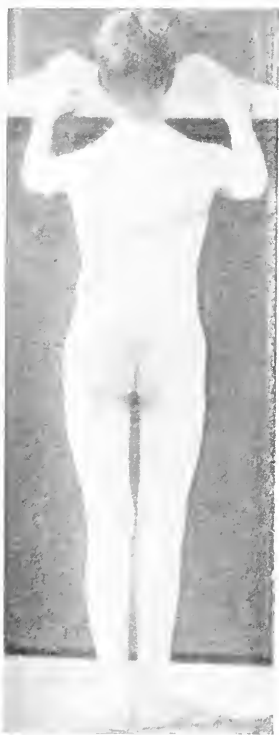


FIG. 1.—Photograph of Case 1, June, 1893.

the stage of repair that but for the history it could not, in many instances, be distinguished from it in patients of the same age, either by examination or by the X-ray photograph.*

A secondary effect of the deformity is disturbance of the equilibrium, and thus a change in the contour of the body. If, for example, the necks of both femora are depressed backward, the support of the body is displaced forward, and the normal lordosis is diminished. If, on the other hand, the inclination of the necks is downward and forward, the trochanters are displaced backward and upward; thus the lordosis is increased and the range of outward rotation of the limbs is restricted.

From the nature of the deformity one may readily explain the symptoms. In unilateral coxa vara the slight limp due to the shortening of the leg, a certain stiffness about the joint after a period of inactivity, and dull pain or discomfort, usually referred to the front of

the thigh, are the most prominent symptoms. These are, in most instances, supposed to be due to rheumatism, or are thought to be "growing pains," until the deformity is more advanced, when a diagnosis of hip disease is usually made. In young children there may be no complaint whatever. On the other hand, in the adolescent, there are usually sensations of weakness and awkwardness and at times, after overexertion or long standing, severe pain about the joint may be experienced. These symptoms are accounted for by the sympathetic disturbances in the joint, as well as by the partial displacement and strain upon the ligaments, in which particular the deformity resembles more nearly the weak foot than simple bowleg or knock-knee.

If the deformity is bilateral, the limp is replaced by a peculiar swaying of the body from side to side, due to the restriction of abduction, a gait resembling that characteristic of knock-knee, in which the legs are alternately lifted by one another. The awkwardness and



FIG. 2.—Photograph of Case 1, September, 1893. Shows, when contrasted with Fig. 1, the relative prominence and elevation of the trochanters, also the absence of the normal lumbar lordosis.

weakness are more marked, and in extreme deformity, in which the legs are crossed, locomotion may be impossible.

* *Colo. Fracture of the Neck of the Femur in Childhood.* *Transactions of the American Orthopedic Association*, vol. 5.

In some instances, particularly in the bilateral form, coxa vara may be accompanied by other evidences of weakness in the lower extremity, more particularly by flat-foot, to which the eversion of the leg predisposes; but in the majority of cases there is, as a rule, little evidence of weakness, and none whatever of general rickets.

The important points in the physical examination are, then, the elevated, prominent, and displaced trochanter, as may be demonstrated by Nélaton's line and Bryant's triangle, and the actual shortening of the leg and the peculiar and unequal limitation of the range of motion dependent upon the deformity. In progressive cases, forced passive motion causes discomfort, and at times it may be resisted by voluntary and involuntary contraction of the muscles. This is, however, rather unusual. There is commonly a certain amount of muscular atrophy, more marked in the thigh than in the leg, which corresponds to the duration and to the degree of the disability.

Differential Diagnosis.—There are very few affections for which coxa vara may be mistaken. One of these is congenital dislocation of the hip, in which the limp, the elevation and prominence of the trochanter, and particularly the abnormal lordosis and waddle of bilateral misplacement are similar to that exceptional form of coxa vara in which the necks are turned forward. But the very fact that a dislocation is congenital, that its symptoms are noted from the moment that the child begins to walk, should exclude coxa vara, which is, as a rule, a deformity of late childhood or adolescence.

In exceptional cases, the depression of the neck of the femur is sufficient to cause symptoms at an early period of life as one of the deformities of general rha-

ple physical examination are these: In congenital dislocation, if the thigh is adducted and flexed to its extreme limit, the neck and head of the displaced bone may



FIG. 4.—Photograph of Case I, September, 1886. Shows the prominence of trochanters.



FIG. 3.—Third photograph of case I.

chitis, and it is possible that coxa vara might be congenital. In such instances the diagnosis may be more difficult. The important diagnostic points in the sim-

be felt above and beyond the trochanter, and there is in addition an abnormal laxity of the joint that allows the trochanter to be moved up and down on the pelvis; in coxa vara there is no abnormal mobility. The trochanter becomes more prominent on flexing and adducting the limb, but neither the neck nor the head of the bone can be made out.

From actual disease of the head or neck of the bone the diagnosis is, as a rule, easily made. In disease, depression of the bone is a late symptom, always preceded by more severe symptoms than those of coxa vara, and always accompanied by muscular spasm, by limitation of motion in all directions, and by prominent distortion of the limb. If tuberculous disease were sufficiently advanced to cause weakness and distortion of the neck, the evidence of its presence in the tenderness, swelling, or abscess would be conspicuous. This case is loaded with more force of more acute disease of which the most common form is infective osteomyelitis. In coxa

vara, on the other hand, the elevation and prominence of the trochanter, denoting the characteristic deformity, are entirely out of proportion to the local discomfort. Motion is usually but slightly limited, never equally in



FIG. 5.—Photograph of Case I, May, 1894. Shows the apparent shortening of the leg—relative to the length of body, as contrasted with Fig. 1.

all directions; thus extension may be abnormally free, while permanent adduction of the limb, due to the deformity, may be present. There is practically never local tenderness, and, of course, no suppuration or other evidence of destructive disease of the bone. In rare instances, after injury or overexertion, pain on motion and spasm of the muscles, resembling the symptoms of a strain or sprain or rheumatism, may be present, but these disappear quickly on rest, leaving only the evident deformity of the neck of the bone, on which the symptoms depend.

Fracture of the neck of the femur is not an uncommon accident in childhood, and, as has been stated, it results in a deformity that is practically traumatic coxa vara. The history of the accident should explain the cause of the symptoms.

Ætiology of the Deformity.—As is well known, there are two periods of life when static deformities of the

bones of the lower extremity appear, or, at least, increase to the point of attracting attention. One is in early childhood, when deformity is most often the direct result of evident general weakness due to rachitis; the other is in adolescence, which is popularly recognized as a period of weakness, when the stability of the tissues is lessened by rapid growth and when the strain of laborious occupation is often added to the increase of body weight.

Coxa vara more often appears at this latter time, when there is no evidence of general weakness or disease that would account for the local deformity. For this reason, doubtless, coxa vara as an affection of adolescence was not recognized until 1889, when E. Müller* obtained a specimen by resection, and, by comparing the symptoms with those of similar cases under observation, was enabled to describe the peculiarities of a “new deformity.” It should be stated, however, that depression of the neck of the femur, as one of the deformities of childhood, had been recognized by Fiorani in 1881. He described in detail fifteen cases that had been mistaken by others for congenital dislocation of the hip, and suggested treatment, dietetic, instrumental, and operative. The article appears, however, to have attracted little attention, and, as has been stated, the deformity is of much greater importance when it appears in later life than as an ordinary rachitic deformity.†

From my own experience it would seem that one rarely has the opportunity to make a diagnosis of coxa vara as a part of the general rachitic deformities of early childhood. In fact, I have been able to identify but one case; in this instance the symptoms were not only typical, but the diagnosis was confirmed by an X-ray photograph. (See Fig. 10.) Slight elevation of the trochanter is often found, as was pointed out by Nélaton‡ long ago, but it is usually caused in part by the abducted thighs that accompany general bowing of the legs, and in part by an outward bend of the upper third of the femora.

The comparative infrequency of the deformity is undoubtedly explained by the fact that the neck is very short, and, being inclined less than in older subjects, is thus protected from strain. I am disposed, however, to believe that what may be called a latent deformity acquired at this time may be a factor of considerable importance in the causation of coxa vara of adolescence. As is well known, the angle formed by the shaft and the neck of the bone is considerably less in the adult femur than in that of the child. According to Humphrey, this is the result of a gradual depression coincident with the growth, and comes to an end with it. As it is evident that the strain upon the neck of the femur is increased with its inclination, one may understand how,

* *Beitrag zur Klin. Chir.*, Bd. iv, S. 137.

† *Supra una forma speciale di zoppicamento.* *Gaz. degli ospitale*, 16 and 17, 1881.

‡ *Path. chir.*, t. ii, p. 521.

if the angle be lessened at an early age, the depression might, under favoring conditions, be exaggerated to deformity at a later period of life.

My attention was first called to this mechanical factor in the aetiology by an investigation of the later results of fracture of the neck of the femur in childhood.* The primary effect of the injury is a depression of the neck of the bone, often to a right angle with the shaft, as in older subjects. As I have already reported to this association, an investigation of these cases several years later showed a marked increase of the deformity, due to a further depression of the neck. Two of the cases in which, when discharged from treatment, there was practically no disability or deformity, when again examined presented all the characteristics of extreme coxa vara. In these cases it was evident that the deformity had increased simply because the depressed bone, subjected to greater strain because of its abnormal position, had given way.

In many cases of adolescent coxa vara, careful questioning will elicit a history either of weakness or of rhachitis in childhood, and of the latter affection evidences may still remain. In such instances the inference seems reasonable that the neck of the femur may have been slightly depressed and thus exposed to overstrain at a later stage of development. Or, again, slight or pronounced depression may be a congenital peculiarity, or the neck of the bone may be simply structurally weak and thus unable to withstand the strain that may be put upon it. When one considers that the angle of inclination of the neck,† as observed in adult femora, may vary between one hundred and ten and one hundred and forty degrees; that it may project either forward to an angle of twenty degrees, or backward to one of twenty-five degrees with the shaft, and the other differences in the form, size, and shape that may be observed in the femora of apparently normal subjects, there seems more likelihood that an inherited or acquired weakness, either of position or structure, may be the important predisposing cause of the deformity. The exciting causes would then include the instability of rapid growth, overstrain, overweight, and injury.

The alternative hypothesis must be general or local disease. General active rhachitis is practically never present in the ordinary type of case, and osteomalacia and osteitis deformans need not be considered, because depression of the neck of the femur is, in such instances, merely an incident in the general distortion of the skeleton. Some of the German writers have suggested a new disease of the bone to account for the weakness—so-called local rickets or local osteomalacia—but the examination of the few specimens that have been obtained offers little support to such a theory. In one, from an adult subject, the structure was normal; others, exam-

ined during the progressive stage, showed congestion or softening and slight irregularity of the epiphyseal cartilage. But these are changes that one would expect to find in a bone that was bending or breaking under over-



FIG. 6.—Photograph of Case I, May, 1898, five years after the first examination, showing the effect of the operation on the right femur, also the improvement in the general condition.

strain. Improper surroundings, insufficient nourishment, or debility from any cause, undoubtedly lessen the resistance of the bones as of other parts, but the presence of actual local disease is by no means necessary to explain the deformity of the usual type, at least.

As has been stated, the physical effects of the deformity are explained by the nature of the deformity itself, but the symptoms vary according to its duration, to its progress, and with the age and susceptibility of the individual. The depression of the neck increases until the resistance of the compressed bone prevents further deformity, and in many instances stability is not assured until the head of the femur rests upon the shaft in the neighborhood of the trochanter major. If the deformity does not develop until adolescence, its progress is usually comparatively rapid, but if the affection begins in early childhood, its progress may be more gradual and the deformity is likely to be greater. From the symptoms in these cases it would appear that the depression may be intermittent in its progress, as shown by intervals of discomfort in long periods of important health,

* Transactions of the American Orthopaedic Association, vol. x.

† Humphreys. *Journal of Anatomy and Physiology*, vol. xxvi, 1890, p. 236.

although, as a rule, the child is considered to be somewhat weak and awkward at all times.

When stability is finally assured, the symptoms of discomfort disappear and the gradual accommodative



FIG. 7.—Case II. Shows the tilting of the pelvis and the apparent shortening of the leg in unilateral coxa vara. See skingram (Fig. 8).

changes in the structures about the joint lessen the effect of the deformity.

In the unilateral form the limp alone remains, and even in double coxa vara of an advanced degree the patient walks about with a shuffling gait with surprising ease.

Treatment.—The treatment of coxa vara may be preventive or operative. If the diagnosis is made in the early stage, one may hope, by removing the strain of occupation or overexertion, or, in the unilateral deformity, by the use of a perineal crutch-splint, to check its progress. Together with the support, massage, exercise, and passive forcible manipulation of the leg in the direction of limited motion should be employed. In all cases supervision will be required to prevent overstrain of the weakened part during childhood and adolescence, or until the period of growth has been completed.

Operative treatment may also be preventive; for example, one may attempt to replace the depressed neck in its normal position by the removal of a cuneiform section from the base of the trochanter. This operation I have performed in three instances for the relief

of coxa vara. Two of them were cases of the traumatic form (fracture of the neck of the femur). The operation was successful in every case, and the first has been under observation for more than a year. It would seem to be indicated in deformity of early childhood in which the depression is likely to be slowly progressive, and finally extreme.

The other operation is intended, primarily, to relieve the effects of the deformity, of which the most disastrous is fixed adduction of the leg. In two cases of this character linear osteotomy below the trochanter minor permitted me to abduct and rotate the shaft inward to its normal position with complete and permanent relief of the disability. This operation should be performed whenever the depression of the bone prevents the abduction necessary for the proper use of the limb. Even if the affection is in the progressive stage, the fixation during the stage of repair and the nutritive changes consequent upon it seem to exert a favorable influence upon the structures within the joint.*

After union of the divided parts is firm, a perineal crutch should be employed for several months, together with exercise and massage, as already mentioned.

The following cases are described in order to illustrate the different types of the deformity:

CASE I. *A Case of Bilateral Coxa Vara in an Adolescent, illustrating the Course of the Affection, its Symptoms, and its Treatment by Operation; observed from its Inception to its Final Cure; with Photographs, showing*

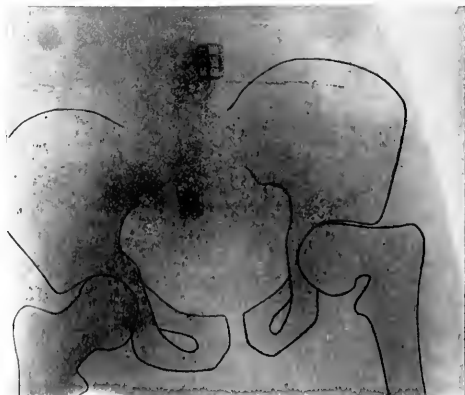


FIG. 8. Skingram of Case II. Shows the mechanical limitation of abduction caused by the deformity and the compensatory tilting of the pelvis.

the Effects of the Deformity at its Different Stages.—The patient, a well-nourished boy of sixteen years of age, came to the Hospital for Ruptured and Crippled

* Kracke has operated in one case by removing a cuneiform section from the upper anterior part of the outer third of the neck. The final result is not stated, and its advantages are doubtful. *Centrbl. f. Chir.*, February 8, 1896. Biedinger has performed linear osteotomy of the neck. *Wien. klin. Woch.*, 1896, No. 22. Laueinstein recommends osteotomy below the trochanter major. *Centrbl. f. Chir.*, 1896, No. 26.

in June, 1893. Except for a somewhat exaggerated eversion of the feet, there was nothing peculiar in his appearance. In infancy he was said to have had weak ankles, and the flat feet were of indefinite duration, but had never caused discomfort. For two years he had been working hard as a grocer's boy, and at one time, about a year before his first visit to the hospital, he had noticed a peculiar soreness and stiffness about the right hip that were thought to be "growing pain," symptoms that were relieved by a long vacation. On his return the usual work was resumed, and soon after the discomfort again became apparent and more troublesome; recently similar symptoms had appeared on the other side. These symptoms were, as he expressed it, a feeling of fatigue and pain referred to the joint and to the front of the thigh, and a stiffness and discomfort about the hip after sitting or remaining long in one position. These symptoms were increased by overwork and relieved somewhat by rest.

On examination, the eversion and flatness of the feet were very apparent; there were slight knock-knee and slight hyperextension of the knees on both sides; the gait was somewhat rolling in character; the trochanters were slightly elevated above Nélaton's line, more prominent than normal, and displaced forward. The lumbar lordosis was diminished. Motion at the hip joints was painless; it was unrestricted in flexion and extension; abduction was limited to about one third of its normal range, and inward rotation was checked when the feet became parallel with one another. There was slight atrophy of the thighs, and the circulation in the lower extremities seemed to be impaired. The patient was advised to discontinue his work and to employ massage and exercises, but this advice was disregarded. Three months later he again appeared at the hospital, at this time able to walk only with much effort, the body swaying from side to side in a marked and peculiar manner. The peculiarities that have been described had become greatly exaggerated. Behind each prominent trochanter there was a deep sulcus; the normal lumbar lordosis was absent. Abduction of the legs was very greatly restricted, and flexion was only possible when they were crossed—that is, flexion caused adduction of the thighs and greatly increased the outward rotation. Four months later the patient could walk only with crutches, the right leg being crossed over its fellow. The outward rotation had increased so that the foot rested on its outer border when the patient was lying on the table. With the limbs extended, the greatest possible separation of the knees was three inches and a half; the trochanters were at least an inch and a half above Nélaton's line. In October, 1894, the patient decided to submit to the operation that had been proposed several months before, an osteotomy of both femora, in order to restore the lost abduction.

At the time of operation, when muscular contraction had been relaxed by the anæsthetic, it was found that a few degrees of the range of abduction remained on the left side, and it was decided to postpone the osteotomy of the left femur until its effect upon the other had been ascertained. The right femur was divided below the trochanter minor; the leg was then drawn outward to the limit of normal abduction and the lower fragment was at the same time rotated inward until the foot was brought to the perpendicular. In this attitude a number of Paris spica bandage was applied. The operation was completely successful in restoring the function of the joint. Crutches were used for several months, after

which the patient was allowed to go about. His cure appears absolute, and for the last year he has been working regularly. There has been no increase of deformity on the left side, and, as motion has been restored in the right hip, he experiences no disability from the loss of the range of abduction on the left side.

CASE II. Unilateral Coxa Vara treated by Operation.—A well-developed boy, seventeen years of age, came to the hospital in October, 1896, because of a limp and pain referred to the right hip. The symptoms had been noticed thirteen months before, after he had "overran himself," and the discomfort and disability had steadily increased. The examination showed typical



FIG. 2.—Case II. Unilateral coxa vara of the anterior form illustrating the abnormal lordosis, an attitude simulating that of congenital dislocation of the hips.

coxa vara, with adduction of the limb, caused by muscular contraction, that increased an actual shortening of three quarters of an inch to two inches and a half. Subtrochanteric osteotomy was performed in November in the manner already described. A patellar crutch splint was worn for six months. All symptoms are now relieved, and the patient appears to be well.

CASE III. Bilateral Coxa Vara, Anterior Form, Simulating Congenital Dislocation of the Hips, in which

* A flaccid, encephalic child, born at term, was brought to the hospital at the age of three years because of a limp and pain in the right hip. The child was found to have a bilateral coxa vara of the anterior form, with a marked shortening of the limbs, and a marked lordosis of the spine. The right femur was divided below the trochanter minor, and the leg was drawn outward to the limit of normal abduction and the lower fragment was at the same time rotated inward until the foot was brought to the perpendicular. In this attitude a number of Paris spica bandage was applied. The operation was completely successful in restoring the function of the joint. Crutches were used for several months, after

the Symptoms were Continuous with Infantile Rhachitis.—A boy, nine years of age, was brought to the Vanderbilt Clinic in March, 1897. He had suffered from rhachitis in early childhood, had always been weak, and had always waddled slightly in walking. Recently he had complained of pain in the limbs and back. In appearance the case simulated congenital dislocation very closely, in the increased lordosis, the broadening of the pelvis, and the elevated and prominent trochanters, which were an inch and a half above Nélaton's line. As the femoral necks were displaced forward as well as downward, extension and eversion of the legs were restricted, and the greatest possible separation of the knees was eight inches.

In another case, a boy of eleven, the history and physical signs were almost identical, except that the symptoms had not appeared until the age of five years.

CASE IV. Unilateral Coxa Vara in a Child; the Direct Result of Rhachitis; the Diagnosis confirmed by the X Ray.—In November, 1896, a colored child, two years and a half of age, was brought to the hospital because of a limp. There was no complaint of pain or discomfort other than a certain general weakness caused by rhachitis. On examination the cause of the limp was found to be typical coxa vara of the right side. The actual shortening was three quarters of an inch. The

ing, elevation of the trochanter, eversion of the leg, and pain on motion. From the symptoms that had pre-



FIG. 11.—Skigram of Case V.

ceded the sudden disability, a diagnosis of fracture or collapse of a weakened neck was made, and after time had been allowed for consolidation the brace was removed at night and massage and exercise instituted.

At the present time, the brace, attached to the heel of the shoe, is used as a partial support of the weight during the day. The motions of the joint are practically normal except in abduction. The importance of a proper diagnosis, in substituting active motion for prolonged rest, that would otherwise have been enforced, is self-evident. The deformity is shown by the accompanying Röntgen picture.

This case illustrates the effect of slight traumatism on a weakened and deformed structure—*i. e.*, fracture of the neck of the femur secondary to coxa vara. Injury may be the exciting cause of the deformity also, either by weakening the support at the epiphyseal line or actually displacing the epiphysis.

Finally, simple fracture of the neck of the femur is, after union has taken place, typical coxa vara.

Of the twenty-six cases, twenty were in males and six were in females. The deformity was bilateral in five, of the right hip only in fourteen, and of the left in seven.

In three instances distortion of the neck was forward as well as backward; in twenty-four cases the inclination was backward.*

* Since this paper was written four additional cases have come under observation—all of the left side; three in boys, aged respectively four, five, and sixteen years, and one in a girl thirteen years old.



FIG. 10.—Skigram of Case IV.—Coxa vara in a child two and a half years of age, the effect of general rhachitis.

deformity is demonstrated by the accompanying Röntgen picture.

CASE V. Fracture, or Sudden Depression of a Weakened Femoral Neck. A colored girl, thirteen years of age, was brought to the Vanderbilt Clinic in May, 1897, wearing a brace that had been applied for supposed disease of the left hip joint. For about eight months she had been limping and complaining of occasional pain and discomfort about the left hip and thigh, and, according to the mother, the left foot was habitually eversion. Six weeks before the patient's visit to the clinic, descending the street, the leg gave way and she fell backward on the ground. She was carried home and placed in bed, where she remained until the splint was applied. During this time there was no pain except on motion of the leg.

The radiograph showed typical appearance of fracture of the neck of the femur—an inch of actual shorten-

Statistical Table.

NAME.	Date.	Sex.	Side affected.	Age.	Duration.	Direction of the dis- tortion of the backward.	Actual shortening in inches.	Apparent shortening.	History or evidence of former rickets.	Prominent symptoms.
Nelson	October, 1896.	F.	R.	2½	6 months.	Post.	1	1	Yes.	Limp.
Van Orden	June, 1896.	M.	R.	4	1 year.	Post.	1	1	No.	Limp; occasional pain.
Zeltermann	January, 1898.	M.	R.	7	6 months.	Post.	1	1	Yes.	Limp.
Seeger	March, 1897.	F.	L.	8	2 years.	Post.	1	1	No.	Discomfort and limp.
Vitt	March, 1897.	M.	L.	7	6 months.	Post.	1	1	Yes.	Limp and fatigue.
Hirsch	March, 1897.	M.	D.	9	2 years.	Ant.	1	1	Yes.	Waddle; pain in back; weakness.
Reardon	March, 1898.	M.	D.	11	6 years.	Ant.	1	1	Yes.	Waddle; fatigue; pain at times.
Beckmeyer	March, 1895.	M.	D.	11	8 years.	Post.	1	1	Yes.	Limp; later, waddle and fatigue.
Brill	March, 1894.	M.	R.	11	1 year.	Post.	1	1	No.	Limp; occasional pain.
Greer	January, 1896.	M.	L.	12	8 years.	Post.	1	1	Yes.	Limp; occasional pain.
Thomas	March, 1898.	F.	D.	12	1 year.	Ant.	R. ½	1 ½	Yes.	Limp; later, waddle and pain.
Abrams	March, 1898.	F.	R.	13	10 years.	Ant.	1	1	No.	Limp; weakness.
Rutehmann	July, 1896.	M.	R.	13	6 months.	Post.	1	1	No.	Limp; stiffness.
Fraed	November, 1894.	F.	L.	13	1 year.	Post.	1	1	No.	Limp; pain.
Cunningham	May, 1897.	F.	L.	14	1 year.	Post.	1	1	No.	Limp; sudden disability.
Herbert	April, 1897.	M.	R.	14	6 months.	Post.	1	1	No.	Limp; stiffness.
Bruening	October, 1897.	M.	R.	15	2 months.	Post.	1	1	No.	Limp; stiffness.
Betz	June, 1892.	M.	R.	15	1 year.	Post.	1	3	No.	Limp.
Lawson	October, 1897.	M.	R.	15	1 year.	Post.	1	1 ½	No.	Limp; pain.
Rose	January, 1896.	M.	L.	15	14 months.	Post.	1	1 ½	No.	Limp; pain.
Allen	April, 1897.	M.	L.	16	1 month.	Post.	1	1 ½	No.	Limp; stiffness.
Puckhaber	June, 1893.	M.	D.	16	8 months.	Post.	1	1 ½	Yes.	Limp; waddle; stiffness.
Zimmermann	October, 1896.	M.	R.	17	13 months.	Post.	1	2 ½	No.	Limp; pain.
Fessler	March, 1894.	M.	L.	17	6 months.	Post.	1	1	No.	Limp; stiffness.
Eudertich	January, 1897.	F.	R.	22	12 months.	Post.	1	1	No.	Limp.
Adult	March, 1896.	M.	R.	36	.....	Post.	1	1 ½	No.	Limp.

In a total of ninety-six cases, including these and others reported by Hofmeister, Kocher, Leusser, Muller, Ogston, and others, seventy-four were in males and twenty-two were in females. In twenty-three the deformity was bilateral, in seventy-three it was of one side.

The twenty-six patients may be divided into groups, according to the age at which they applied for treatment: Adolescents (twelve to eighteen years of age), 15; later childhood (five to eleven years of age), 7; childhood (less than five years of age), 3; adults, 2.

If, however, the supposed duration of the symptoms be subtracted from the age, the classification according to the time of onset would change the groups as follows: Adolescents, 12; later childhood, 8; childhood, 5; unknown, 1.

The two adults desired examination simply for the explanation of the limp, which had been of many years' duration.

One case was brought for treatment during the course of infantile rickets, and in eight others there was evidence of former rickets in slight distortion of the extremities, or a history of weakness, apparently rickets, in early childhood.

In three instances the symptoms of progressive coxa vara appeared to have been continuous, although remittent, with this early weakness.

A more extended experience has convinced me that coxa vara is much less rare than has been supposed. What has been spoken of as latent deformity is a predisposing cause of deformity of a later period applies equally well to all other static deformities of the class;

and it emphasizes the importance of a more careful oversight of weakly children, for the purpose of detecting and correcting not only the distortions of the bones, but also the improper postures and restriction of motion in the joints that may cause awkwardness or lead to disability.

In addition to the thirty cases of coxa vara, fourteen cases of fracture of the neck of the femur in childhood, traumatic coxa vara, have come under my observation within a few years. Here, then, are forty-four cases of a deformity until very recently unrecognized, the larger number of which were sent to the hospital or clinic for the treatment of hip disease. If such simple disabilities are so mistaken, it may be inferred that other affections of a non-tuberculous nature not infrequently pass as hip disease also.

The first step toward a proper classification of disease of the hip joint on a clinical, pathological, and anatomical basis must be the elimination of affections which are non-tuberculous in their character, and incidentally this paper may be considered as a contribution to this object.

Fowls' Brains in Neurasthenia. The *Lyon medical* for December 18th, quoting the *Revue française de pathologie* for October 31st, says that the Chinese have for a long time treated neurasthenia, headache, and general feebleness by the brain of a fowl. The brain is dried, powdered, and mixed with sugar and aromatic substances and administered in capsules. The *Lyon medical* is a very reliable journal, which can no more be blind our treatment to the value of fowl brains.

HYGIENE VERSUS DRUGS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

By CHARLES L. MINOR, M. D.,

ASHEVILLE, N. C.

(Concluded from page 55.)

OUR ancestors, feeling after the truth, tried by the use of cold to harden delicate children, their aim being to render them less unduly sensitive to changes of temperature, and while they killed many in their misdirected efforts there was the kernel of a great truth in their attempts. The relaxed, oversensitive skin, unbalanced circulation, and irritable nervous system of the consumptive, is a matter of daily experience to you all. The ease with which he chills, the great activity, but deficient tone of his vasomotor system, the quick flushings and pallors, all show the lack of balance in that great second respiratory system, the skin and cutaneous circulation. The stimulus to the cutaneous nerves of the cold salt water, the deepening of the breathing, the equalizing and toning up of the circulation, the removal of stasis, the increase of metabolism, the stimulation of the appetite, and the general sense of well-being it produces, are all undeniable to those who have tried it fairly. I realize that the idea of a cold bath to a delicate consumptive may seem severe. I have rarely proposed it without at first being met with indignant protest; but begun gradually and cautiously, with variations to suit the individual case, a long and faithful trial of it has convinced me that in all but advanced or actively febrile cases it is a remedy of wonderful power, and you will find few patients who will not learn not simply to tolerate it, but to enjoy it. For its full application in the method I will describe, I select cases with very moderate rise of temperature and no great activity of pulmonary lesion. The patient begins with water at 100° by the thermometer (no guesswork being ever allowed), and its temperature is reduced each morning by one degree, till the final temperature, varying with the case from 70° F. to 55° F., is reached. In this way there will be in the beginning no shock to the system, and the patient becomes easily accustomed to the bath. I regard it as essential that it be taken immediately on rising, the windows having been shut, and a fire lighted an hour beforehand in winter, so that the room shall have reached an equable temperature. No dawdling over other matters is allowed. He rises, strips, and steps warm from his bed into the tub in which are one or two buckets of water at the correct temperature and a handful of sea salt. Saturating his large sponge with water, and standing erect, he holds it over his shoulders and neck and squeeze out the whole volume at once in a shower down his back and chest, thus producing a douche, not to be confused with the slower bath, but very bracing and stimulating. He repeats this rapidly over all parts of his body for about half a minute, jumps out, and rubs

off briskly and actively with a rough Turkish towel, and dresses at once. The result will be a glow all over, and an inexpressibly delightful feeling of invigoration and strength, with a driving away of that languor and weariness with which the consumptive so often rises. If a shock is feared he can moderate it by first wetting his arms and legs from wrist or ankle to trunk, and then proceeding as above. In those whose strength is not great a nurse can do the squeezing of the sponge and the rubbing, but where strong enough the action involved in these motions is valuable in itself.

The only contraindications are lack of reaction, as shown by blueness, gooseflesh, and chilliness, and which, if conditions are proper, will not occur; and in a few cases an aggravation of the cough, which calls for a temporary rise in the temperature of the water.

Not only is the patient delightfully stimulated and braced thereby, but his liability to catching cold and to chilliness is greatly decreased, and his appetite materially benefited. Let me urge on those of you who have not given this method a fair and satisfactory trial to use it, assuring you that carried out in this manner it will not disappoint you. Be careful not to give indefinite directions; as the father of hydrotherapy, Winternitz, says no man can expect results if he orders so potent a remedy with an indefiniteness he would be ashamed of were he dealing with calomel or morphine.

In much weakened cases it is good to begin with cool sponging in bed, followed by frictions, and in this way we can soon prepare them to use the tub.

Exercise, while one of our most valuable aids, is the most generally abused by the public. It is a common experience in Asheville to be called to see patients who, after arrival, having undertaken to treat themselves, and, having experienced the usual tonic effects of such a climate, feel capable of anything, and have undertaken long walks, supposing that they could do nothing so good as to exercise, with a result almost always disastrous; the barely recovering balance in favor of the organism in its fight with sickness is upset, the overtax on the system is too great, fever, exhaustion, or other symptoms return, and I have even seen it the beginning of a fatal dissemination of the disease.

The more exercise that is taken within the limit of their ability the better, but how many know their limit? How few but overestimate it many times! The only safe rule is to exercise short of the point of fatigue, combined with the other of no exercise with a temperature over 100.4°.

Find out your patient's vitality and capacity for exercise. It varies in the widest limits; one apparently strong girl may feel fagged after a hundred yards, another you judge no stronger may easily tolerate two miles without harm. Here, almost more than anywhere else, is where the doctor can be of use to his patient in preventing him from squandering foolishly his small surplus of force. Having found his limit, begin with

that as a maximum, not to be exceeded without orders, which will come as signs of increasing strength permit it. In this way one is able to take a patient who, on arrival, can not walk at all, and by gradual and cautious additions finally enable him to walk his two, four, even ten miles a day with ease. The same thing, if not so easily, can be accomplished in the cities, but, remembering the fatigue of walking on stone pavements, let him take the trolley to the suburban regions, husbanding his strength to use it in those less dusty, more attractive, and purer-aired localities.

After the patient's strength is well on the mend, commence to attack the dyspnoea and to strengthen the heart by the very gradual practice of increasingly steep inclines. In this way we can assist in expanding collapsed portions of the lungs, invigorating the circulation, and improving muscular strength, till finally really steep hills can be taken with ease. In all cases the injudicious zeal of relatives and friends, which prompts them to urge the loved one on to further and further exertions for his supposed benefit, must be guarded against; with a patient improving rapidly—and in phthisis the improvement in subjective symptoms far outstrips that in objective—it is hard for them to realize the wisdom of the Italian motto, *Festina lente*, make haste slowly. Especially when the patient is allowed to drive—an exercise I generally postpone until he can walk a little without trouble—the five, ten, or fifteen minutes allowed at first seems pitifully small and almost a waste of carriage hire. Yet I have lately seen a drive, extended far beyond the limit of my orders, bring back the pyrexia in a case where it had disappeared, and necessitate a recommencing of my work.

Horseback on a easy-gaited, preferably a racking horse, for cases well advanced toward recovery, is an ideal exercise, but where any activity exists it is contraindicated, as any one who has had lung trouble, and who knows from experience how riding a hard-trotting horse makes his weak lung ache and pain, will agree.

Massage, or other passive exercise, I find of great value to prepare cases for beginning to walk, when from long sickness their limbs have wasted from disuse; but the average *masseuse* is apt to be unduly vigorous, and to wish to push the remedy too far and too rapidly. At best, it is but a temporary substitute for walking, and no indoor, passive exercise can ever take the place of an active outdoor one.

In cases where signs of activity in the process have nearly ceased, where râles are disappearing and fever subsiding, and where it is desired, as it is in every case, to increase the capacity of the thorax, and therefore of the lungs, to deepen the chest, to open out the shoulders, I have great confidence in wisely directed pulmonary gymnastics, taken when possible in the open air. The parallel and horizontal bars in a few of the strongest cases can do wonders in expanding contracted chests and increasing vital capacity, whose increase, as shown

by the spirometer, I hold to be an invaluable prognostic sign; but, ordinarily, much milder pulmonary gymnastics are first demanded, beginning with quiet deep breathings while lying with shoulders thrown back, in bed, and advancing them to deep breathings while erect with the mouth closed, with the aid of the gradual raising of the arms from the sides during inspiration till they meet over the head, where breath is held, to fall gradually again during expiration. When this can be done say twelve times with ease, and the deepness of the breathing is sensibly increased, I use the corner chest-exercise, where the patient, standing in a corner, with feet well out, and hands on the converging walls, falls inward with inspiration and forces himself backward with expiration. As a final, and to me unapproachable chest exercise, as valuable and less violent than the horizontal bars, I place that form of Indian-club exercise called the double figure of eight: both clubs, those weighing a pound are sufficient, coming down and inward across the body during expiration, thus making it unusually complete, then crossing and rising across the face to make behind the shoulder during inspiration, which it wonderfully deepens, a small circle, from which point the arms are thrown outward laterally, and begin their downward course again. In certain cases where the respiratory murmur is very feeble, those lazy breathers referred to by Dr. McLean, the pneumatic cabinet I have found invaluable, but its weight and great expense render its general adoption unlikely. By such exercises as these we can, even in the army of superficial breathers, whose members so largely form the recruits for the still larger army of consumptives, soon get marked increase of expansion, vital capacity, and ease and fullness of breathing, and strengthen the respiratory murmur while, at the same time, lessening bronchitis. I have always believed that the good results to be got by the various inhalations are due not so much to the drugs inhaled as to the excellent breathing exercises given, a view I am glad lately to see advocated by so good an authority as Denison, and the fact that all of them, however various the mixtures used, gave good results while uniting in but one common feature, the deep inspirations necessary, would seem to uphold this view.

Such, then, are the chief non-medical measures at our disposal in the therapy of consumption. I do not bring to your attention to-day any of these strategies or new. Their virtues have been written of often before, but they have not won the attention which the complete trial their merits deserve.

Behind us lie innumerable cases cured with gradually increasing doses, a few good, and a few bad, cases cured with most utterly valueless remedies, and a few better cases cured by means before us, but a few others cured by the application of serum therapy, and a few better cases cured by the experimental stage. To neither drug nor serum would I deny virtues. I use them with good effect, and I believe

cases, but with every added year grows the belief that as the basis and foundation of a rational treatment of pulmonary tuberculosis must lie an intelligent and persistent application of hygienic, dietetic, and, if possible, climatic measures. That they will demand much patience and attention on the part of the physician is no argument against them. Knopff, in an article in the *Medical Record*, in February, 1897, well puts it, when he says, referring to such measures, "They can be carried out by any physician in private practice whose patient is willing, obedient, and so situated as to have all the comforts and surroundings which hygienic and dietetic treatment demands"; and even if in our great cities there are many patients whose means makes it difficult to procure for them all the advantages we could wish, yet even here one great blessing of the method appears, that given a proper perseverance there is no other treatment so many of whose features are so reasonable and inexpensive.

I do not stand here to-day as a Nihilist in medicine, denying any efficacy to drugs; no man realizes their value more than I, and no one is more willing to confess their utility, when judiciously used, or to avail himself of them as adjuvants. My contention is that they are not always judiciously used; that it is too often forgotten that no drug, whatever its virtues, which upsets the stomach, destroys the appetite, or creates a disgust, can, or ever did, do good.

I have no doubt that I will be told that creosote has been given with good effect in large doses. I myself have had patients with stomachs so hardy that they could tolerate thirty drops or more at a dose, but such patients get well as much or more because of their wonderful stomachs than from the effect of the drug. I know that cod-liver oil in those whom it does not nauseate is the most admirable of foods, but with what percentage does it fully agree? I know that cough syrups with morphine will control a cough, but at what price?

On the whole, I have not been able to convince myself that the majority of cases can tolerate more than three to five drops of Morsani's creosote, not always that much, give it as you will—in milk, in capsules, pill, whisky, or gentian; that oil will be assimilated without nausea by most consumptives, or that the lessening of the sweats which atropine produces is more than of temporary value.

Bitter tonics, or orexine, for those who can afford it, will create a fictitious appetite for a few days, but disappoint us in the long run. Fever medicines will bring down the temperature, but the cause is not removed, and it will rise again as active as ever; morphine will control the cough, but it paralyzes the vitality of the protoplasm, whose activity is our patient's salvation, and its effect are but fleeting and deceptive. Medicines galore are, and have been, recommended; each has had its enthusiastic advocates, nearly all, after a longer

or shorter course, have again sunk into innocuous desuetude—and why?

Because no man can treat phthisis long and not realize that nothing which in the least degree upsets the stomach, that very citadel of the consumptive's defenses, can, whatever its theoretical advantages, be anything but a curse to his patient.

The only valuable results are those which will last, which are based on a vitalizing of the whole system, a stimulation of metabolism, on a strengthening of the cells to oppose the invader; the thing to be attacked is not so much the lesion in the lung directly as the lowered vitality of the body and the deficiency of appetite, and drugs directed to a conquering of the bacillus *in situ* are not to be compared with measures which enable the organism itself to acquire strength to overcome the disease. These things can be brought about best in two ways: by an improvement of nutrition, which must, after all, come from the stomach, and an increase of the amount of oxygen taken into the lungs.

Air and Food.—Those are the drugs to which we can always trust. They will never deceive us, if our patient can be taught to get both in good amounts; not necessarily the air of our climatic resorts, splendid as it is, and wonderfully as it can help us in our work. There is good air, if not the best, all around you, if you can but teach your patient how to take it in; wherever good sunshine goes are possibilities for health; wherever food can be enjoyed and assimilated there is hope of cure.

Throw away two thirds of your medicine bottles and use the other third less often; carry out a hygienic plan of life. Even if your patient can not leave the city for the purer air of the mountain heights, stimulate the appetite by Nature's appetizers, air and exercise, which alone are permanent in their results, and which are as superior to gentian and nux and quassia as sunlight is to darkness. If he can get away to a better climate send him by all means. In that higher, purer air he will have an aid in his struggle which can not be overestimated, and whose beneficent results I in my own case have felt.

But if he can not, if he belong not to the upper ten, but to the submerged million, if he must stay where he is, do not let him lose hope; teach him how to live; remember what are the bosom friends of phthisis—darkness, dampness, want of air. Fight these, move his quarters till the sun can peep in and bring him health, till, under the eaves, if need be, he escapes the miasm which rises from the damp subsoil, and see that he has the cubic air space which science has taught us to demand. Teach him how to use his lungs, widen the narrow chest, stimulate the sluggish skin, and regulate thereby the unbalanced circulation, bring into play all those natural recuperative forces which he has neglected, or never known; then will the appetite and the spirits begin to return; then will the color of health replace the

hectic flush in his cheeks; then will the lesions in his lungs clear up, or cicatrize, or calcify, and he will live to bless you.

65 FRENCH BROAD AVENUE.

SOME REMARKS ANENT FACTS NOT FOUND IN TEXT-BOOKS.*

By W. PEYRE PORCHER, M.D.,
CHARLESTON, S. C.

THE first point to which I would ask your attention is the extraordinary frequency with which deformities of the septum, abnormal growths, and obstruction to respiration, even to partial or complete closure of one nostril, are found, while the patient is entirely unaware of the existence of such obstructions or abnormalities. To be more explicit, I am sure that you have all, like myself, commonly found projecting from the septum a shelf of cartilage extending clear across to the opposite turbinate, the sharp and hard edge of which is pressed up against or actually sticks into the mucous membrane; or from old adhesions the outer wall of the nose or mucous membrane of the turbinate may be partially or completely adherent to the septum; or there may be polypi or other tumors, of the presence of which the patients will express complete ignorance, and in some instances they will with difficulty be induced to put credence in the statement of the physician that such conditions actually exist; or he may be met with the astonishing reply that if such conditions really exist they have become quite accustomed to their presence and do not wish their removal. I have found that in many instances this is one of the chief obstacles which one has to contend against in laryngology, unlike ophthalmology, where the least irritation about the eye causes the patient to rush to the operator for relief; but not so with the otologist and rhinologist. We are told that incipient deafness, marked obstruction to respiration, and very considerable hoarseness are only natural characteristics peculiar to the individual, and should not be meddled with.

I will illustrate this with two typical cases very common in everyday practice among specialists: The patient was a young lady in whose left nostril there was a deflected septum, and an echondrosis or cartilaginous shelf projected across the nostril and into the opposite turbinate. Being aware of some irritation, the cause of which she knew not, she had picked a hole through the septum in the effort to rid herself of it. She was immensely surprised when I told her of the presence of this shelf of cartilage. After its complete removal and the restoration of the normal calibre of the inferior meatus, she remarked to me that she felt a great draught through the nose, to which she was unaccustomed, and

that she intended sending her whole family down to me, thinking that perhaps they might have a like condition. It has always amused me to hear the remarks made by different individuals after the removal of these growths, and obstructions to normal respiration. One man said, with a long-drawn breath, "Why, I can breathe upstairs and downstairs!" A former Episcopal bishop of this State said, "Why, I can breathe down in my boots!" A young married man said he could sleep so soundly that the baby could not wake him up. Another said his sight was improved so much that his glasses were getting too strong for him. A young lady said that she got so much air through her nose that it frightened her, and many persons have said they were wonderfully improved. In every instance it has been hard to convince the patients that these conditions existed, even though the obstruction may have sufficed to cause complete closure of one nostril. Of course, the atresia of the nostril has been so gradual, owing to the slow growth of the tumor, that the patients have become accustomed to the limited breathing capacity, and they are actually surprised when the normal calibre of the nose is restored.

The next cases were those of several girls in a family who were the victims of incipient deafness. They were found to be all mouth breathers of a marked type, and large adenoids in the vault of the pharynx were present. The external ears were partially filled with impacted cerumen and aspergilli. They had been much addicted to salt-water bathing, and especially fond of diving. I informed their parents of the condition of the ears and urged the necessary operations. I was amazed when I was told by the father that the deafness was natural to them, and that he did not wish any operations or interference whatsoever.

I could cite numerous other cases illustrating these facts, but these are typical cases and suffice to show my meaning. The evident explanation is, that persons become so accustomed to limited respiration, slight deafness, nasal atresia, and subacute laryngitis that they will almost or completely ignore their presence, and even when these abnormal conditions are pointed out to them they will in some instances prefer anything short of total disability to operative interference of any kind. This forms a very serious obstacle to the carrying out of proper preventive measures in the treatment of incipient diseases of the upper air passages.

The next point that I would allude to is the inability of patients to blow pus out of the nose when it has accumulated and been accumulating for so long that the inferior meatus is filled with pus. Of course, this is only found when one or other of the accessory sinuses has been continually overflowing with pus, but from some cause or other the patients are unable to blow out the pus and the accessory sinuses always partially filled. This occurs so rarely that it can not be attributed to ignorance or stupidity on the part of the patient. The fact of its long continuance, in young subjects es-

* Read before the American Laryngological Association at its twenty-third annual congress.

pecially, would constitute a strong factor in the final atrophic degeneration of the contiguous surrounding tissues. I have always been at a loss to understand this inability of the patients to blow pus out of the nostrils. Even with the aid of the spray or douche, unless the patients were very carefully trained, the nose would often remain more or less bathed with pus and mucus. The explanation appears to be that the discharge reforms so rapidly that the patient finds it impossible to remove it. Frequently before atrophic degeneration has greatly advanced, the calibre of the nostril has become so narrowed by the tumefied turbinates, or rather the space between the turbinates and the septum is so small, that the pus is retained above even when it is blown out below, so that persistent cleansing of the nostril is required to maintain patency.

I am not aware that these points have already been touched upon in the text-books or brochures, or, if so, they have escaped my attention, but they occur so generally that I have thought them worthy to ask your attention to them.

A CASE OF

FRACTURE OF THE NECK OF THE FEMUR.*

By FIELDING LEWIS TAYLOR, M. A., M. D.

BRIDGET H., aged forty-five years, single, housekeeper. This woman attempted to board a bridge train on the evening of November 12, 1895. She says the guard shut the gate just as she was stepping on, and that the train moved off, throwing her to the station platform.

I first saw her at her home on November 13th. There was loss of function of the right lower extremity, eversion of the foot, prominence of the hip, swelling and pain on pressure in Scarpa's triangle, and marked crepitus, but no shortening at that time, although it appeared later.

She was treated until December 18th on a firm bed with Buck's extension and lateral sand bags, the external one extending from the axilla to the foot. A weight of about ten pounds was used in the beginning and gradually lessened to about four. When the extension appliances were removed no crepitus could be made out; there was a large callus and some abnormal mobility of the shaft.

A plaster case was applied to the entire limb for two weeks longer. When the cast was removed union was firm. There was some peri-arthritis of the knee due to the long-continued strain on the ligaments in a rheumatic subject. Under massage, nutrition and function gradually improved. The patient was provided with crutches and encouraged to use the limb. After about two months she used only a stick, which was discarded later.

Examination now shows slight prominence of the trochanter, shortening of about an inch and a half, normal flexion, inversion, and eversion, while the patient walks with scarcely a perceptible limp and experiences no discomfort, although she is at times on her feet for

many hours together. While the late appearance of the shortening would seem to indicate a fracture of the small part of the neck, from the bony union, the large callus, the marked crepitus, and the excellent functional result, I take it that the femur was broken at the base of the neck.

During the long confinement to bed careful attention was paid to the general condition by means of sponge baths and massage.

SOME CRITICAL AND DESULTORY REMARKS ON RECENT LARYNGOLOGICAL AND RHINOLOGICAL LITERATURE.

By JONATHAN WRIGHT, M. D.

(Eighth Paper.)

IN a few years even the most important medical monographs have ceased to attract attention, and the vast majority of them have ceased to deserve it. It is nevertheless true that in the enormous flood of such productions many a valuable scientific observation, many a subtle suggestion, many an accurate deduction is lost sight of, sometimes temporarily, but usually forever. It is a lamentable fact that, with a very few exceptions, our medical writings are as devoid of literary grace of composition as the hieroglyphs on Egyptian tombs. Dreary stretches of disjointed clauses and of uncouth and wonderfully compounded words of ancient or foreign derivation overwhelm the mind already burdened with the attempt to grasp an unfamiliar fact or idea. It seems as though our facts, in order to acquire weight, were laden with ponderosity of statement. Goethe makes Mephistopheles in the guise of Faust say to the pedantic student:

"Wer will was Lebendiges erkennen und beschreiben
Sucht erst den Geist heraus zu treiben."

As Goldsmith said to Johnson, our little fishes talk like whales, and this is a habit which is easily acquired and hard to escape from. Occasionally a distinguished medical author will write a popular scientific paper for the lay reader, and it is then ludicrous to observe how the leviathan of the deep flounders in shallow waters.

It might seem that perhaps we should seek an explanation of our difficulties as readers in our own mental equipment, for Goethe, with equal wisdom, elsewhere says: "Whoever is about to accuse an author of obscurity should first scrutinize his own understanding to see if everything there is perfectly clear. In the twilight even plain print is illegible." This is a retort which is more applicable to the individual critic than to the totality of reading humanity.

The nature of a medical topic may not equal in interest that of a tale

"Of moving accidents by flood and field,
Of hairbreadth 'scapes—"

but the driest and most intricate subject may be illumined by the light stroke of a skillful hand. The par-

* Presented before the Society of the Alumni of the City (Charity) Hospital, November 9, 1898.

liamentary tactics of the eighteenth century are as prosaic a subject as can be found in English history, but in the glowing lines of Macaulay's essays they assume an absorbing interest even to the casual reader. It is doubtless true that such power is a heaven-bestowed gift and a faculty not to be acquired at the wish or the effort of the average medical essayist. Nevertheless, a little care, a little extra labor, and perhaps a little time spent outside the narrow domains of purely medical literature would give many a medical essay wings for a more prolonged flight than is usually the case.

Medicine is not an exact science, and much of the ambiguity of its literature may be considered due to the uncertainties and doubts which are inherent in its theses, but the existence of a doubt is no reason why the terms of the doubt should not be clearly stated. From time to time there is an agitation for a universal scientific language. The idea is, of course, utterly impracticable—"such stuff as dreams are made of"—but were it established our present dreary literature would be still more unbearable, for we would then be writing in a foreign language. Virchow has lately delivered in London an address which has justly excited the admiration of the scientific world, but not so much on account of the intrinsic value of the matter which it contained as by the fact that this learned man was able to use a foreign tongue to express his thought. It can not be denied that this was admirably done; but turn for a moment to his lectures on cellular pathology and morbid tumors, written, some of them, more than forty years ago, and the difference will at once be seen between the foreign tongue and the native idiom. By attentive perusal of the English speech the speaker's ideas may be grasped, but in his German lectures the thought flows into one's consciousness without apparent mental effort. It may be said that in reading the *Cellular Pathology* and the *Morbid Tumors* now we are going over familiar ground, while his Charing Cross lecture is comparatively unfamiliar. Proceed to read precisely the same familiar principles in regard to morbid growths laid down in the first ordinary text-book of pathology which comes to hand. Soon our minds are benumbed with fatigue and our eyelids weighed down with sleep. If this is so in regard to familiar subjects, how much more severe is the mental effort to grasp a new and perhaps an important idea from the involved and tortuous phrases of much of our medical literature! Is it any wonder then, as I have said before, that many an important fact, many an accurate deduction, is lost in the turbid flood when it should sparkle with a brilliancy borrowed from the stream?

The title which I chose for these papers several years ago and the forbearance of the editor allowed me to be a little discursive in my remarks. I started to write what has preceded as a preface to a review of a work which had escaped my attention at the time it was published in 1895, and which I have lately read with per-

haps a keener appreciation, because the recent trend of rhinological thought has gone to prove that much in the work is of value and deserves an attention which it has not received, so far as I am able to judge. I hasten to say, lest it be thought that I have, had this work in view in my foregoing remarks, that it forms a refreshing contrast to much of the recondite literature, especially the German literature, of the subject. It is written in especially clear and forcible language. I refer to the work of Harkne: *Beiträge zur Pathologie und Therapie der oberen Athmungswege*. In the study of the pathology of the nose the rhinologist labors under exceptional, almost unique, disadvantages. In the first place, the topography of the region is complicated and difficult to understand without the help afforded by constant demonstration on the cadaver. Unfortunately, it is precisely that help which it is so difficult for the rhinologist to obtain. Frequently his only conception of the gross anatomy of the parts which he treats is derived from scanty reference in general or special text-books, from the shadowy and indistinct recollections he has of having once or twice in his student days seen a head sawn open in the dissecting room, and from the innumerable but monocular glimpses afforded by anterior and posterior rhinoscopy. This scanty anatomical study is due not so much to neglect as to absence of opportunity. Even where the student is compelled to make sections of the head in the dissecting room, which is now fortunately the case in most schools, the variations in the configuration and relationship of important parts are so great that a large number of specimens must be carefully studied and compared before a full knowledge is obtained of the anatomy of the internal nose. This is manifestly impossible in anything but a post-graduate curriculum. Study of the internal nose in the post-mortem rooms of our hospitals is attended by great difficulties. The greatest obstacle to be overcome is the technical one of gaining admission to the cavities of the nose without the disfigurement of the face of the subject. While in this our beloved land the laity has not an especially great respect for the sanctity of human life and social privacy, it has a great regard not only for the lives of dogs and cats, but for the sanctity of the human cadaver. Even when

"He's only a pauper whom nobody owns,"

we do not dare in the post-mortem room to disturb the features of the dead. Harkne's method of making the examination to some extent obviates this difficulty, and should be studied by those having opportunity to make use of it. But even if we had free access to the post-mortem room and the free use of the cadaver, which would afford us opportunity for perfect familiarity with the normal anatomy of the parts, there is still another very great difficulty in the study of the pathology of nasal disease. Nearly all the problems with which we as rhinologists have to deal are found in those nasal

affections which do not result fatally. The examination of the nose in a subject who had died of nasal sarcoma would not be very instructive, but if we could follow our cases of atrophic rhinitis through a portion at least of their clinical history to the autopsy table, and there make numerous and careful examinations of the mucous membrane and bony structures of the whole intranasal tract, it is very possible indeed that much of the obscurity which enshrouds the etiology and pathogenesis of this distressing malady would be cleared away. It can scarcely be doubted that to these manifold difficulties we owe the lamentable fact that the development of our knowledge of the pathology of the internal nose lags far behind that of almost every other organ in the body. To Zuckerkandl, the Fraenkels, Dmochowski, and Harke rhinologists owe a debt for what they have done in supplying us with much of the exact knowledge of nasal pathology which we possess.

Harke, in the first place, calls attention to that very frequent form of nasal obstruction due to the lack of function of the external muscles of the nose which results in the collapse of the alæ. In our endeavors to make a straight septal wall out of a distorted quadrangular cartilage we frequently fail in the chief end we should have in view—i. e., to reestablish proper nasal respiration. This purpose is frequently defeated by the flaccidity of the alæ nasi. Harke rightly says this condition is frequently seen in city dwellers, and quite aptly calls their noses "dead noses." It is perfectly useless to remove a posterior nasal spur if we have no hope of removing an anterior nasal paralysis. Dr. Myles and others have invented nasal dilators to overcome this difficulty, but as yet they have not proved very efficacious for various reasons, although Harke speaks approvingly of the one known as Feldbausch's. I see no reason why in these cases a great deal might not be done by nasal massage, by the use of the faradaic or galvanic current, and by automatic exercise of the nasal muscles. In some instances, however, there has seemed to me to be hopeless paralysis if not atrophy of the external nasal muscles. Far too little attention has been given to this subject. It is a very frequent condition existing alone and still more frequent as complicating internal forms of obstruction, because in the latter we are apt to have paresis and atrophy from long-continued disuse.

Harke says that in his dissections he very frequently found the mucosa of the nasal chambers very severely inflamed, while that of the accessory sinuses was entirely normal, showing, as he believes, that in spite of the direct anatomical continuity of structure pathological processes heitate to pass from the former to the latter region. I think it was Bo-worth who, several years ago, pointed out this fact in regard to inflammation of the nose and throat, saying that there is an appreciable interval of time in the involvement of contiguous regions.

Harke speaks in a suggestive way of the usual method of blowing the nose while the nostrils are compressed. I must confess that while I can readily understand how an augmented intranasal air pressure may dilate the openings of the accessory cavities and of the Eustachian tubes, I can not bring myself to believe that very much fluid can enter these closed cavities if it is of the usual consistence of the nasal mucus or more viscid than the normal fluid. When, by means of the intranasal alkaline douche, we have washed away and diluted the usual secretions of the parts, it is doubtless a fact that this action may follow forcible blowing of the nose, to the possible injury of the mucous membranes of those cavities. In fact, sad clinical experience frequently reminds us that this danger is not a fanciful one. On the other hand, it is also easy to understand how an unobstructed blast of air past these openings tends to rarefy the air in them, and to suck out the fluid contents. It is a matter of great importance that the rhinologist should have this principle of physics plainly in his mind when he orders the nasal douche. With the proper directions properly carried out, it is a harmless and indispensable adjuvant of nasal treatment. In studying this question the works of Donders, Bloch, Paulsen, and Franke will be found invaluable.

Harke attempts to explain the discrepancy in the statements of authors as to the relative frequency of the dental and the intranasal origin of the purulent inflammations of the maxillary sinus, by saying that in the former case there results a foul-smelling discharge which does not tend to spontaneous cure, and these are the cases which come under the observation of the clinician. Those cases of *intranasal* origin either recover spontaneously or their symptoms after a time become insignificant, and they are not compelled to seek relief. It will be remembered that E. Fraenkel and Dmochowski found post mortem a large percentage of cases in which the maxillary sinus was diseased, and in which during life there had been no sign of it. They claimed that much the larger proportion of these cases gave no evidence of the disease having been of dental origin. Harke makes the sententious remark: "Carious teeth and antrum suppuration frequently dwell beneath the same roof without ever having made one another's acquaintance." He found food in the antrum after death when violent emesis had immediately preceded dissolution. Particles of tobacco were found in the antra of snuff takers, and he suggests this as a cause of suppuration in some cases. I have seen snuff particles in the discharge from the external wound of a frontal-sinus case addicted to the habit, but I am uncertain if this was the primary cause of the affection. Harke's belief in the rarity of the direct extension of inflammation from the nasal to the accessory cavities is based on his experiences derived from autopsies. His statements are interesting when he declares that the accessory sinuses are not only frequently found uninvolved

in cases of diphtheria and croupous inflammation of the nose, but that in chronic ozæna the same observation may be made. Such direct observations tend to refute the claims advanced a few years ago by many writers that sinus disease is the frequent if not the constant cause of ozæna in atrophic catarrh.

I am not prepared to accept the statement that the irritation of mucopurulent secretion from the accessory sinuses in adults is the frequent cause of lymphoid hypertrophy in the nasopharynx and oropharynx. There seems to be more plausibility in his subsequent statement in regard to children. In infants the accessory sinuses practically do not exist, for even the maxillary sinus is of insignificant size; but the nasal passages themselves are really small sinuses which open into the nasopharynx, and the mucopurulent secretion from their inflamed mucosa acts, he says, as a constant irritation to the lymphoid follicles in the pharyngeal mucous membrane. This is as much as to say that the inflammation of the mucosa of the nasopharynx and oropharynx is secondary to that of the nasal structures. Although Dr. Jacobi and others also maintain this position, I see no reason to believe that it is essentially the true one. Lymphoid metabolism being so active in infant life, *a priori* it is fair to presume that the lymphoid structures are the first to react to the vasomotor shock which we usually call "catching cold," and I have no recollection of ever having examined the nasopharynx of an infant, however young, suffering from nasal obstruction or "the snuffles" without finding lymphoid hypertrophy, and I have on one or two occasions seen in the pharynx of stillborn children considerable amounts of it. It nevertheless seems extremely probable that both nasal catarrh and nasopharyngeal obstruction in infants react injuriously on one another, and the anatomical relations which Harke points out between the nasal and postnasal regions in children should be kept in mind.

These are a few of the points which Harke dwells on in the *résumé* of his investigations, and there are other valuable hints for the rhinologist to be found in his brochure.

No one can look at the picture presented by the high-power microscopic objective of the atrophic process in the nasal mucous membrane without realizing that he is confronted by a very active process—a process of confusion, a process of metamorphosis, a process of annihilation. The disorderly invasion of fibrous tissue and hordes of round cells into the peaceful realm of glands, blood-vessels, and fibro-elastic tissue; the change of the surface columnar epithelium to the flat horny cells of the integument, and of the curling elastic fibrous tissue into sodden scarlike masses; the destruction of the unstriped muscular tissue, and thereby the abolition of the working power of the contractile blood reservoirs and of the secreting functions of the racemose glands, enable us to realize that there is at work in this tissue

some agency whose power is as great as it is mysterious. The first impression is that this can not be essentially the dying embers of a previously blazing hypertrophic process. However it may have started, it must now receive an impetus which was lacking in that early proliferative stage of hypertrophy. And yet there is no one feature of the process which we do not find amply exemplified in the tissue changes of hypertrophy of the nasal mucous membrane. We have here the cornification of the surface epithelium, but this is also noted in the thickened epithelial layers of the papillary hypertrophies of the inferior and the edematous hypertrophies of the middle turbinated bodies. In the atrophied mucous membrane we find all the stroma crowded with round cells, but in hypertrophy we also find areas of round-cell infiltration. We find that the walls of the blood-vessels are thickened in their fibrous coats, as is also the outside tunic of the glands. We find knobs of the fibrous tissue jutting into the lumina of the blood-vessels and of the glands. We find that this fibrous tissue is compressing circulatory and secretory structures, but all these things are also seen in the hypertrophic process. There is one distinguishing observation, however, which is significant. We miss, in the atrophic process, the glandular and vascular ectasia which are such prominent features in hypertrophy that they are regarded as essential to it. A little study convinces us that these features of the histology of hypertrophy may have been obliterated by the relentless overgrowth of the low-grade fibrous tissue. That this is not simply a process of substitution we know from the fact that the thickness of the mucous membrane has greatly diminished. This is a withering tissue that is being formed in such abundance. It clogs, by its presence, the nourishing blood and lymph channels. It causes the death not only of the more highly organized constituents of the mucous membrane by direct pressure upon them and by cutting off their alimentary channels, but it shuts off its own nutriment and so subsequently brings about its own atrophy. Now this is fibrosis. What in hypertrophy is only one of many processes is here the preponderant if not the sole one. The facts seem easily stated, and the course of events easily followed. The question underlying it all, and the question which interests us practically as rhinologists quite as much as it does in a purely scientific sense, is, "What is the cause of it all?" I imagine it does not make much difference in reality, so far as aetiology is concerned, whether we consider this process as starting frequently or even always in a hypertrophied membrane, or whether we acknowledge that it often or even always starts *de novo*. Before we proceed further, however, we must separate as definitely as we can one set of cases from another. This is to be done by the clinical features they present. In one well defined class, which for convenience we may call the "atrophy of age," we may place those cases unattended through-

out their whole course by the crust formation and the odor which so mark the clinical picture of the class which, again for convenience, we may call the "atrophy of youth." I do not mean to deny that crusts and odor may exist after fifty, or that simple atrophy without either may exist during earlier life, but I would give this name to each class because in the first category people at or after middle life predominate, while in the second younger people predominate. Now let us dismiss from our consideration the first class of cases—"the atrophy of age." There is nothing in the clinical history of these cases and there is nothing in the pathology to make us regard them in any other light than as having suffered from a chronic inflammation of the mucosa, which has resulted in atrophy through the agency of a fibrosis. The process has stopped or is not of sufficient intensity to give rise to the more distressing of the symptoms. If these were the only cases we encounter our wonder at the course of the pathological process would not be aroused. But the second class of cases, "the atrophy of youth," possesses certain clinical and pathological features which cause us to ask the question already formulated: "What is the cause of all this? Where is the *vis a tergo* which keeps this process going? What are its limitations?"

Cholewa and Cordes* have attempted to answer these problems which nasal pathology presents, and have recently published the results of their investigations of the pathogenesis of atrophic rhinitis. They dispose of the many hypotheses which have appeared from time to time by well-considered criticism. They deny an antecedent condition of hypertrophy of the mucosa as a necessity for the beginning of atrophy. They describe the pathological phenomena in the soft parts, and then proceed to a more detailed account of their examination of the bone changes. This part of their work has interested me very much because it falls in line with the results of my own observations of the mechanism of the vascular supply of the nasal mucosa† and of various bone changes. I have attempted to show in the paper referred to how the blood supply to the vascular sinuses in the mucosa is regulated by the apposition of the radical arteries and veins as they lie in the bony canals, the dilatation of the artery diminishing and its contraction increasing the lumen of the vein. Now it is apparent that if this is the principal food channel of the mucosa any interference, such as absorption or blocking of the bony channels in which the blood-vessels lie, must vitally affect the metabolic changes in the mucosa. The authors profess to demonstrate that the bone changes are the primary ones in atrophic rhinitis. In one of these reviews (June 27, 1896) I have shown how in bony cysts of the middle turbinal we have at the same time bone absorption and

bone proliferation going on through the simultaneous and interchangeable activity of the osteoclasts and the osteoblasts respectively. Others have described the same phenomena more fully and more minutely. Now, Cholewa and Cordes, after reviewing this work, go on to show that in atrophic rhinitis bone absorption takes place without the compensatory bone proliferation. They then cite what they regard as satisfactory evidence that the changes in the mucosa are subsequent to and dependent upon the bone changes. They point out the parallel condition of the bone in osteomalacia, and admit that the cause of this peculiar process is not to be found in the bone itself but in some unknown factor. This is one step forward in the explanation of the method, but does not reveal the mystery of the cause. It still remains to be seen if their contention that the disease begins in the bone will stand the light which may be thrown by future investigations. There are many of the clinical facts which tell for the acceptance of this conclusion, not the least of which is the almost universally acknowledged futility of attempts at a radical cure by topical, or indeed by any measures. It would be manifestly unreasonable to suppose that any surface application would materially influence a bone lesion beneath the mucosa.

REPORT OF A CASE OF TUBERCULOSIS OF THE BLADDER, WITH SOME OBSERVATIONS.

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VITTO C., aged twenty-five years. Operated upon at Columbus Hospital. Married; no venereal history. Had "lung trouble" eighteen months previously. For a number of months he had been suffering from frequency of urination, and at the time of admission to the hospital he urinated every half hour or more frequently, the act being associated with pain and hemorrhage. No bacilli were found in the urine. The examination for stone was negative.

Suprapubic cystotomy was performed in June, 1896. The mucous membrane of the bladder was found greatly congested and studded with tubercles; several small ulcers were present at the base. The bladder was drained for about six weeks and washed out daily. The symptoms all disappeared, and ten months after the operation the patient was apparently well and the urine clear.

Tuberculosis of the bladder has heretofore been considered by many simply as a complication of an almost hopeless tuberculous disease of the kidney or genital organs and not amenable to treatment, and they have failed to recognize the fact that at times it is an independent, primary, localized lesion of the bladder which, especially early in its course, is fairly amenable to treatment.

Tuberculosis of the bladder is a condition which,

* *Archiv für Laryngologie, etc.*, Band viii, Heft 1.

† *American Journal of the Medical Sciences*, May, 1895.

no doubt, is often allowed to go unrecognized, particularly the primary, localized cases, they being often diagnosed and treated as cases of simple chronic cystitis, especially if they have been preceded by a gonorrhoeal infection.

We may divide the cases of tuberculosis of the bladder into primary, localized tuberculosis of the bladder, cases in which the disease begins in and remains limited to that organ, and into secondary or complicated cases, those in which the bladder affection is secondary to or complicated by tuberculosis in some part of the genital tract or in the kidney.

As to the ætiology of tuberculosis of the bladder, we sometimes get a tuberculous family history, and we may also get a history of a previous chronic cystitis which, in turn, may have been caused by a gonorrhoeal infection.

The disease is more common in men than in women, yet not very rare in the latter. It is a disease of early and middle adult life, occurring mostly between twenty and thirty-five years of age, although it may occur in children and in elderly persons.

It is well to bear in mind that the kidney frequently becomes secondarily involved by extension of the disease from the bladder.

In cases of primary tuberculosis of the bladder it is rather improbable that the bacilli gain entrance to the bladder during coition with a tuberculous person, although this is less improbable in the case of women.

Bacilli are excreted by the kidney in the urine, and they may thus reach the bladder, or they may be introduced into the bladder by sounds and catheters. No doubt the most common way by which the bacilli reach the mucous membrane of the bladder is through the blood current from tuberculous foci situated in other remote parts of the body. The bacilli having reached the bladder by any means, and especially if its mucous membrane is in an unhealthy condition from any cause whatsoever, particularly if it is in a condition of chronic inflammation following a gonorrhoeal infection, we can readily understand the ease with which a localized tuberculous cystitis may be started up. The presence of tuberculous bacilli in a healthy bladder would not probably of itself set up a tuberculous cystitis.

The secondary or complicated cases of tuberculous cystitis are caused by extension of the disease directly from a tuberculous focus situated in the genital organs, or else from a tuberculous kidney through the ureter.

The bladder is usually diminished in size, often very much so; the walls are much thickened, and the mucous membrane is greatly congested. Ulcers are, as a rule, present, usually in the neighborhood of the ureter or urethral orifices, or occupying the position of the trigone at the base; there are usually one or two large ulcers or a greater number of smaller ones. The mucous membrane usually presents a greater or less number of miliary tubercles studding its surface; thus the

mucous membrane may be simply very markedly congested or ulcerated, or there may be present miliary tubercles in greater or less number.

In secondary or complicated cases we find, in addition to the above, the prostate, seminal vesicles, epididymis, or testes, or one or both kidneys involved in the process.

In both primary and secondary cases there are apt to be tuberculous lesions in other remote parts of the body—for example, in the lungs—and in doubtful cases these remote lesions should be carefully sought for.

Sufferers from this disease are sometimes otherwise fairly healthy individuals, especially those in whom the disease is limited to the bladder and when the disease is in its early stage. Usually, however, tuberculous cystitis is complicated by tuberculous lesions elsewhere in the genito-urinary tract, and in many cases there are evidences of tuberculous lesions in more remote parts of the body.

The history of tuberculosis of the bladder is usually of some duration, varying from six months to several years, and no doubt the bladder may be the seat of a tuberculous inflammation for some time before any symptoms appear to indicate the presence of the disease.

Frequency of micturition, gradually becoming more marked and associated with pain and occasionally followed by the discharge of a few drops of blood, is usually the first symptom. These signs become more and more marked as time goes on, until, in the advanced cases, the urine is voided every half hour, or more frequently, night and day, accompanied by great pain and considerable hæmorrhages, and the patients are unable to sleep or obtain any relief from their almost constant suffering. When this stage in the course of the disease is reached the condition of the patient is almost unendurable, and the general health becomes greatly impaired. If other active tuberculous foci are present, of course they add still further to the misery of the patient.

Rontier divides the course of the disease into two periods—the first up to the time that micturition becomes almost incessant, and the second from that time on.

Examination with sound or catheter is usually accompanied by much pain and hæmorrhage.

The urine usually contains pus, blood, and detritus from the mucous membrane of the bladder, and may be either acid or alkaline.

No doubt tubercle bacilli are usually present in the urine, but it is often very difficult to find them. However, they should be carefully looked for in order to aid in elucidating the character of the trouble.

In making the diagnosis it is necessary to determine whether a given case is primary and limited to the bladder, or secondary and complicated by a similar process elsewhere in the genito-urinary tract. The diagnosis of the secondary cases is often easy if we suc-

ceed in finding evidence of tuberculosis in other parts of the genito-urinary tract. Diagnosis of primary cases is frequently difficult; at times the family history or signs of tuberculosis in other remote parts of the body—for example, the lungs—will excite our suspicions and aid us; but only too often, in these primary cases, the physician limits his investigation to the local conditions and fails to overhaul the lungs, etc., and the result is that these unfortunates are treated for every possible disease and by every conceivable method except the correct one. One should be on the lookout for these cases. All cases of chronic cystitis that appear intractable and fail to respond to our ordinary methods of treatment should receive a thorough examination with the idea of tuberculosis in mind. It is just these cases of primary localized tuberculous cystitis that are most favorable for treatment, and they are the ones that most readily escape our recognition. We often have to make our diagnosis by excluding other conditions which give us very similar symptoms, and that is the case especially if we fail to discover bacilli in the urine.

The symptoms of tuberculosis of the bladder often resemble those of stone, but cases of stone are easily recognized by the sound, and patients suffering from stone, when they remain quiet and recumbent, usually obtain a considerable amount of relief. Not so with tuberculous cystitis. The symptoms of tuberculous cystitis above enumerated also resemble rather closely those of neoplasm.

The cystoscope often gives us considerable help, but not so much as one would expect at first thought. In the first place, the cystoscope is usually very painful to use in tuberculous cystitis; and, secondly, the fluid in the bladder in tuberculous cystitis is cloudy and bloody, and, although the bladder is well washed out before examination, the bleeding is apt to continue and thus obscure the view. In women the urethra may be dilated, and through it the examination of the bladder made with the finger.

One should not forget that a gonorrhoeal cystitis may become tuberculous, especially if it is neglected, or if there is a tuberculous deposit elsewhere in the body, or by the use of infected instruments.

In cases of doubt, and they occur with the best diagnosticians, one should not delay too long with an exploratory suprapubic cystotomy, especially if the symptoms are pressing.

Within the last few years cases of tuberculosis of the bladder have been treated, and with success, by making a suprapubic opening and draining the bladder, and this procedure seems to me, at least for most of the cases, probably all the primary cases, not only justifiable but proper.

In the primary cases this operation offers a very good chance of complete cure; and even in the secondary or complicated cases the result, as evidenced by some of

the cases reported by others, is often very satisfactory—cure of the bladder lesion being obtained, the distress and hemorrhages from the bladder relieved, and an opportunity thus afforded to recuperate by rest, feeding, general medication, etc.; the tuberculous processes in other parts of the body may indirectly be brought to a standstill, and at times, even in what would seem almost hopeless, secondary, complicated cases, we are able to effect a cure. Several such cases have been reported. The great point is to make the diagnosis early before the kidney is involved, and not to wait too long with other methods of treatment, because the kidneys, one or both, will finally become involved by extension of the disease, and then this radical method of treatment by operation gives us much less satisfactory results.

Even when one is not certain of the diagnosis the operation will clear it up, and is still the best means of relieving similar symptoms due to other causes, as, for example, stone, tumor, foreign bodies, etc. Further, in late cases it is wise to operate to relieve the misery of the patient, even where there is no hope of curing the disease. The dangers from the operation itself are small.

The operation cures by securing rest to the bladder, and it gives the surgeon the best chance to treat the mucous membrane locally.

As the ulceration is almost invariably at the base of the bladder, the suprapubic has many advantages over the perineal operation; the interior of the bladder can be inspected with ease through a suprapubic incision, and the retention of a drainage tube in a suprapubic wound is attended with much less suffering than in a perineal wound. In women the suprapubic operation has many obvious advantages over the formation of a vesico-vaginal fistula.

Some surgeons recommend, in the early stages of the disease, treatment of the general condition of the patient and the regular irrigation of the bladder with various antiseptics, etc., and do not believe in operating until later, when micturition has become almost incessant and accompanied with great suffering; then it is often too late to operate with any other hope than that of ameliorating the sufferings of the patient. The kidney is usually involved by this time in the tuberculous process. The operation should not be delayed too long, especially if there is no improvement under less radical methods.

The operation is done with the patient preferably in the Trendelenburg posture: the tubes are introduced into the bladder and held fast to the edges of the wound with a silk stitch. The fistula should be left open and the bladder washed out daily with some mild antiseptic solution until the urine clears up, and this may take weeks or months, when, as a rule, the fistula closes spontaneously.

There are different views as to the treatment of the ulcers at the time of operation; some use the eurette, some perfor the Paquelin, still others rub in iodoform.

It matters little just which one of these procedures is followed. Bardenheuer removed all of the mucous lining of the bladder in three cases; but this seems to be rather unwise, as, aside from the serious element of danger it adds to the operation, it is always questionable whether one gets all the diseased tissue away, and the cases which have not been treated so radically seem to have done very well. Of course, one should attend to the general health by the use of proper diet, tonics, etc., both before and after the operation.

A tuberculous lesion elsewhere—for example, in the lungs, the bones, etc.—is not, in most cases, a counter-indication to the operation, although in advanced cases of pulmonary tuberculosis, etc., the patient should not be operated upon unless his condition is unendurable, owing to the frequent and painful micturition and loss of sleep, etc., when operation may be resorted to as a palliative measure.

In primary cases we have a good chance of cure by operating, especially early; and even in secondary cases, in which the original focus is in some of the genital organs—prostate, testes, etc.—the results are often very good.

In those secondary cases in which the primary lesion is in the kidney the prognosis is but poor unless the process involves but one kidney, and this can be removed or drained, leaving the second kidney healthy.

148 WEST FORTY-EIGHTH STREET.

Therapeutical Notes.

Collutories for Infantile Aphthæ.—The *Gazzetta degli ospedali e delle cliniche* for November 29th gives the following formula:

1. R Sodium borate 4 parts;
Tincture of myrrh 8 "
Syrup of mulberries 60 "

M.

2. R Borax 4 parts;
Tincture of benzoin 2 "
Distilled water 10 "
Syrup of honey 20 "

M.

3. R Calcium chloride 3 parts;
Honey 20 "

M. The patches are to be touched four or five times a day with a camel's hair pened dipped into either of these mixtures.

An Enema for Membranous Enterocolitis. We find the following formula in the *Progres medical* for October 1st, taken from the *Revue medicale de la Suisse romande*:

- R Quince-seed mucilage 7,500 grams;
Bismuth subnitrate, λ 150 "
Bismuth suboxide, λ each, 150 "

M. After purgation with castor oil, this enema is to be administered. It should be retained for twenty-four hours if possible.

The Use of Mercurial Ointment Internally in Syphilis.—Silberstein, of Hamburg (*Therapeutische Monatshefte*, July; *Wiener klinische Rundschau*, November 20th), considers this treatment much simpler than that by inunction and equally efficacious with the painful injection treatment. He gives the following formula:

- R Mercurial ointment 22 grains;
Powdered licorice 75 "
Glycerin 5 drops;
Mucilage of gum arabic a sufficiency.

M. Divide into sixty pills. Two to be taken twice a day. The mouth must be kept scrupulously clean. After a week or two the use of the pills is to be resumed. [We are not told how long it is to be continued at first, but presumably it is till the sixty pills have been taken, a period of fifteen days.] During the treatment fatty food may be eaten freely.

Hyperchlorhydria.—Boas (*Gazzetta degli ospedali e delle cliniche*, November 24th) recommends the following:

- R Sulphate of sodium 450 grains;
Sulphate of potassium 75 "
Chlorate of sodium 450 "
Carbonate of sodium 375 "
Biborate of sodium 150 "

M. A spoonful in hot water to be taken in the morning.

Lactic Acid in Gynecology.—Daleché (cited in the *Gazette hebdomadaire de médecine et de chirurgie* for December 1st), on the theory that lactic acid is the natural antiseptic of the vagina, has made use of it in leucorrhœa, in the form of this solution:

- R Lactic acid 3 parts;
Glycerin 100 "

M.

Tampons soaked in the solution are packed in the vagina. He reports good results.

A Prescription for Aortic Palpitation.—We find the following in the *Clinica moderna* for November 23d:

- R Quinine hydrobromide 60 grains;
Powdered digitalis, λ each, 30 "
Extract of convallaria, λ each, 30 "

M. Divide into forty pills. From two to four to be taken in the course of twenty-four hours.

The Treatment of Trigeminal Neuralgia.—The *Wiener medicinische Presse* for December 4th (*Klinisch-therapeutische Wochenschrift*, December 11th) attributes the following formula to Hirschkron:

- R Phenacetine, λ each 15 grains;
Antipyrine, λ each 15 "
Quinine sulphate 15 "

M. Divide into six powders. One or two to be taken daily.

Treatment of Exophthalmic Goitre. According to the *Revue médicale* for December 28th, Kant recommends the following:

- R Sulphate of dulcousine 1½ grain;
Water 30 minims

M.

To be taken twice or three times daily. The author quotes a case in which the treatment continued for three months produced a marked diminution of the phenomena of the disease. The drug, however, occasionally produces somnolence and inebriety.

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A PROPOSED PACIFIC COAST MEDICAL ASSOCIATION.

In the December number of the *Pacific Record of Medicine and Surgery* there is an editorial article in which the writer advocates the formation of a society representing the medical profession of California, Oregon, Washington, Nevada, and Arizona. He states that neither the California State society nor the San Francisco society is so large or so well attended as it ought to be. The physicians of the Pacific States, naturally, are unable to attend a meeting of the American Medical Association in any considerable number unless the meeting happens to be held in one of those States, for they are to some extent isolated. We are not sure that they are much worse off in this respect than those of the Eastern States, though it must be conceded that the association holds its meetings less often in the Pacific than in the Atlantic States.

Much good work has been done by the various Tri-State associations and by organizations which, like the Mississippi Valley Medical Association, draw their membership from a territory larger than that of any three contiguous States, and yet not so enormously large as to make it seriously inconvenient or very expensive for members to attend the annual meetings. As a general thing, of course, the meetings of the American Medical Association are held in cities that are readily accessible from all parts of the country, save the Pacific slope, and that association presumably will always remain the organization to which the profession will look for work of a national scope. It is not to be wondered at, however, that our colleagues of the Pacific States feel their isolation in society matters that do not call for consideration at the hands of the entire profession of the nation. We can well understand, therefore, that they should look favorably upon our San Francisco contemporary's proposal.

SUGAR AS AN OXYTOIC.

Four or five years ago Bossi employed sugar as an oxytocic in eleven cases of uterine inertia, and in all but one with favorable results (*Revue internationale de bibliographie médicale, pharmaceutique et vétérinaire*,

April 25, 1894); so that its use as a uterine stimulant is not quite a novelty. However, the ecboic properties of sugar have recently been studied anew by Keim, a Paris hospital interne (*Presse médicale*, November 9th), and some account of his observations is likely to add to our knowledge of the matter.

Keim's experience has been with sugar of milk. He reports the cases of three primiparæ and two multiparæ in labor at term and a case of incomplete abortion. In all of them the lactose appeared to exert a favorable influence on the progress of parturition. Keim finds, however, that lactose does not act as an oxytocic unless labor has already really begun; it does not originate uterine contractions. The minimum dose employed by him was five drachms, and smaller doses he regards as less effective; on the other hand, he has found no advantage in giving more than six drachms, but thinks it better to repeat the small dose than to give a larger amount at once. The further the process of labor is advanced the more decided is the action of sugar, and it seems to act more effectively in multiparæ than in primiparæ. It begins to act in from ten minutes to half an hour after its administration as a rule, but in some cases the initiation of renewed uterine action is delayed for an hour or two.

Lactose is said to have no influence on the expulsion of the placenta or on uterine retraction—at least, no such action was observed in Keim's cases—and not to augment post-partum diuresis or hasten or increase lactation. Keim believes that sugar acts as an oxytocic only so long as there is something contained within the uterus, for in the case of incomplete abortion which he reports the action ceased as soon as the placenta had been driven into the cervix. It exerts no deleterious influence on the fœtus. It seems to act, not only on the uterus, but also on the abdominal muscles and, indeed, on the muscular system in general; it is, therefore, not only an oxytocic, but also a true stimulant, a tonic which at the same time rouses the muscular energy and hastens the expulsion of the fœtus.

MINOR PARAGRAPHS.

THE INCINERATION OF GARBAGE IN HAMBURG.

At a recent meeting of the German Society of Public Hygiene, Meyer (*Tribune médicale*, December 21st) described the system employed in Hamburg for the cremation of garbage. It applies to the central part of the city, occupied by about half the population. The works consist of thirty-six Horsfall furnaces. The material to be burned is delivered in sealed metallic receptacles. Combustion is promoted by forcing warm, dry air into the furnaces. This is found to be superior to the Eng-

lish practice of employing steam. Except for kindling purposes, no adventitious fuel is required; the combustion is complete. The heat generated is turned to account in operating dynamo-electric machines for illuminating and other purposes.

LEGAL SERVICES FOR THE STATE HOSPITALS.

DISCUSSING Governor Roosevelt's recommendation that the attorney-general's office should do the work now done by special counsel for the individual lunatic asylums of the State of New York, and the offices of these special counsel abolished, the *Sun* suggests that a sensible way would be to employ local counsel when their services were required, and pay them what such services were reasonably worth.

THE NEW YORK RED CROSS HOSPITAL.

THE *Sun's* account of the opening of this new hospital, in West Ninety-third Street, contains this statement: "No cases will be treated where alcohol has contributed to the sickness." In carrying out this provision the medical officers will have a fine opportunity for the retrospective study of aetiology.

MICE AS A CAUSE OF SYMPTOMS OF ILEUS.

DR. WILHELM FRITZ, of Bischofsheim (*Münchener medicinische Wochenschrift*, 1898, No. 52; *Deutsche Medizinisch-Zeitung*, January 5th), relates the case of a child three years old, that had shown all the symptoms of ileus, but was freed from them by passing two dead mice as the result of a deep enema and a dose of castor oil.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending January 14, 1899:

DISEASES.	Week ending Jan. 7.		Week ending Jan. 14.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	15	12	17	3
Scarlet fever.....	152	4	161	12
Cerebro-spinal meningitis.....	0	1	9	1
Measles.....	127	8	170	7
Diphtheria.....	166	31	192	30
Croup.....	13	7	21	7
Tuberculosis.....	180	177	203	147
Small-pox.....	1	0	0	1
Chicken-pox.....	29	0	45	0

The New York Academy of Medicine.—At the last meeting, on Thursday evening, January 19th, the special order was a paper on Inhibition, by Dr. Samuel J. Meltzer.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, January 25th, Dr. U. S. Roberts will report a recent case of tonsillar and laryngeal diphtheria in which antitoxine was employed. Papers are to be read as follows: Tonsillitis in Children, by Dr. H. D. Chapin; and The Treatment of Dysphagia and Cough, especially in Tuberculosis, by Dr. W. Freudenthal.

At the next meeting of the Section in Obstetrics and Gynecology, on Thursday evening, January 26th, Dr.

Paul F. Mundé will read a paper on Torsion of the Ovarian Pedicle.

Marine-Hospital Service Health Reports.—The following cases of small-pox and yellow fever were reported to the supervising surgeon-general of the United States Marine-Hospital Service during the week ending January 14, 1899:

Small-pox—United States.

	Jan. 6.	Reported present.
Catherine, Ala.....	1	1 case.
Collinsville, Ala.....	Jan. 3-8.	2 cases.
Mobile, Ala.....	Jan. 7.	2 " "
Bedford, Ill.....	Jan. 7.	1 case.
Medina, Ill.....	Jan. 7.	3 cases.
Nebraska City, Neb.....	Dec. 12.	3 " "
Nebraska City, Neb.....	Jan. 7.	3 " "

Small-pox—Foreign.

Antwerp, Belgium.....	Dec. 3-26.	19 cases.	6 deaths.
Rio de Janeiro, Brazil.....	Nov. 26-Dec. 2.	8 " "	6 " "
London, England.....	Dec. 17-24.	1	1 death.
Monterrey, Mexico.....	Dec. 28.	1	1 " "
St. Petersburg, Russia.....	Dec. 3-10.	3 " "	

Yellow Fever—Foreign.

Monterrey, Mexico.....	Dec. 30-Jan. 5.	3 deaths.
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The St. Louis Medical Society.—At the last meeting, on Saturday evening, the 14th inst., the following papers were presented for discussion: A Preliminary Report of the Effects of Ligating the Dorsal Vein of the Penis for Functional Impotence, by Dr. G. Wiley Broome; and Fair Play for the Doctor who Recommends the Specialist; A Hint to Both, by Dr. Robert Barclay.

The City (Charity) Hospital.—Dr. Francis J. Quinlan has been appointed laryngologist and rhinologist to the City (Charity) Hospital.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Pathology, on Tuesday evening, the 17th inst., Dr. H. Y. Grant opened the discussion on a paper entitled The Pathology of Catarrhal Deafness, by Dr. F. W. Hinkel.

The Memphis Medical Society.—We learn from the *Memphis Medical Monthly* that officers for the year have been elected as follows: President, Dr. B. F. Turner; vice-president, Dr. Frank A. Jones; secretary, Dr. E. M. Holder; reporter, Dr. Richmond McKinney.

The Medical Society of City Hospital Alumni, of St. Louis.—At the last regular meeting, on Thursday evening, the 19th inst., the following papers were to be read: Remarks upon an Ear and Throat Infection with Subsequent Involvement of the Neck, by Dr. Ernest H. Cole; Some Practical Suggestions in Ear Examinations, by Dr. John B. Shapleigh; The Use of Water in Diseases of the Digestive System, by Dr. John C. Falk.

The Chicago Eye, Ear, Nose, and Throat College.—We learn that Dr. Horace M. Starkey has been elected professor of ophthalmology.

The Degree of Doctor of Medicine, Summa cum Laude.—We learn, has been conferred upon Dr. Henry Newton Hemmenan, of New York, by one of the largest of the German universities.

Society Meetings for the Coming Week:

Monday, January 24. Medical Society of the County of New York, Lawrence, Massachusetts; Medical Club (private); Cambridge, Massachusetts; Society for Medical Improvement, Baltimore Medical Association.

TUESDAY, January 24th: New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Medical Society of the State of New York; Medical Society of the County of Putnam, N. Y. (quarterly); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, January 25th: New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Medical Society of the County of Albany, N. Y.; Middlesex, Massachusetts, North District Medical Society (Lowell); Gloucester, N. J., County Medical Society (quarterly); Philadelphia County Medical Society.

THURSDAY, January 26th: New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, January 27th: New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, January 28th: New York Medical and Surgical Society (private—annual).

Births, Marriages, and Deaths.

Married.

CLOHESSY—REGAN.—In Buffalo, on Wednesday, January 11th, Dr. Timothy T. Clohessy and Miss Gertrude M. Regan.

KENNARD—WOOD.—In New York, on Wednesday, January 11th, Dr. Louis W. Kennard and Miss Maude Irene Wood.

VILAS—ROUSE.—In Buffalo, on Saturday, January 14th, Mr. Royal Lee Vilas and Miss Bonnie Lillian Rouse, daughter of Dr. Morris D. Rouse.

Died.

BURR.—In Wilmington, Delaware, on Friday, January 13th, Dr. Horace Burr, in the eighty-second year of his age.

CLARK.—In Oswego, N. Y., on Wednesday, January 11th, Dr. Charles C. P. Clark, in the seventy-fifth year of his age.

CLARK.—In Oswego, N. Y., on Monday, January 16th, Mary Bliss Hodges, widow of Dr. Charles C. P. Clark, in the seventy-second year of her age.

DEAN.—In Spartanburg, South Carolina, on Sunday, January 8th, W. P. Dean, son of Dr. George R. Dean, aged sixteen years.

DILL.—In New Orleans, on Monday, January 9th, Dr. John J. Dill, in the forty-fifth year of his age.

RICHARD.—In Georgetown, Delaware, on Friday, January 13th, Dr. Charles H. Richards, in the seventy-second year of his age.

VAN EPPS.—In Schenectady, N. Y., on Saturday, January 10th, Dr. Evert P. Van Epps, in the fiftieth year of his age.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

II.

THE RIGHT TO PRACTISE MEDICINE AND SURGERY.

(Continued from page 28.)

No Restrictions except by Statute.—The common law* of England did not recognize the inability of the public to discriminate for themselves between the qualified and the unqualified practitioners of medicine and surgery, and therefore imposed no restrictions upon the free exercise of the art of healing; the necessity of such a restriction was, however, recognized at an early date, and in the third year of the reign of Henry VIII a law was enacted prohibiting any person from practising medicine or surgery in London, or within seven miles thereof, without first being examined, approved, and admitted by the Bishop of London or the Dean of Paul's, who should call to their aid four doctors of physic and, for surgery, other expert persons in that faculty. The statute further provided that no person should practise outside of London and a seven-mile radius thereof without being first examined and approved by the bishop of his diocese, or his vicar-general, similarly assisted, saving those practising under privileges conferred by the Universities of Cambridge or Oxford. Seven years later a charter was granted to the College of Physicians in London vesting in it the right of examining and admitting to practice formerly granted to the Bishop of London and Dean of Paul's.

Other laws relating to the subject were enacted from time to time, but, owing to their character, they were not applicable to the condition existing in the United States, and consequently never became laws here.

Statutory Restrictions in the United States.—In the United States the legislature of each State has authority to prescribe qualifications which must be possessed by those practising medicine and surgery within its borders, and it may be said without exception that the legislature of each State has exercised this right to a greater or less degree. An elaborate treatment at this point of the statutes of the several States would be inconsistent with the size and scope of this work, yet a brief *résumé* will, it is thought, be of sufficient value to the practitioner to justify devoting to that purpose the necessary space.

General Classification of Requirements.—The qualifications prescribed by the several States to entitle one to begin the practice of medicine and surgery within their respective jurisdictions may be generally classed under the four heads following:

1. The candidate must have a diploma from a medical college in good standing, the length of the course being specified in many States, and ordinarily being three or four years. In addition, he must pass a satisfactory examination before a board of examiners, the subjects to be covered by this examination being frequently specified.

This is the rule in Arizona, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Iowa, Louisiana, Maryland, Minnesota, Montana, New Hampshire, New Jersey, New York, Pennsylvania, South Carolina, and Utah.

* For the distinction between common law and statute law, see Art. i, p. 27.

II. The candidate must pass a satisfactory examination as in the first class, but he is not required to have a diploma from a medical college. In some States of this class the time he shall have spent in the study of medicine is designated.

The following are the States within this class: Alabama, Arkansas, Maine, Massachusetts, Mississippi, North Carolina, North Dakota, Oregon, Tennessee, Texas, Virginia, Washington, and West Virginia.

III. The candidate may either present an acceptable diploma or, if he has no diploma, he may be examined as to his qualifications to practise medicine and surgery.

This is the method of admitting candidates in Colorado, Illinois, Missouri, New Mexico, Rhode Island, Vermont, and Wisconsin.

IV. The applicant must hold a diploma issued by a proper medical college, which must be satisfactorily shown to belong to him.

This qualification is prescribed in California, Indiana,* Kansas, Kentucky, Michigan, Nebraska, Nevada, Ohio, Oklahoma Territory,† South Dakota, and Wyoming.

Indian Territory has a peculiar arrangement which in effect allows the Indians to follow their own customs in regard to doctors or medicine men of their own race, but in the Cherokee and Choctaw Nations provides for the examination of those not citizens of the nation who desire to settle therein to practise medicine. The law also requires the candidate to secure the indorsement of four or more citizens of the nation residing in the vicinity in which he desires to practise medicine.

There is no law protecting the residents of the Creek Nation from incompetent practitioners.

Additional Requirements.—In addition to the requirements classified under these four heads there are certain other requirements which are almost universally imposed—viz., that the candidate shall be twenty-one years of age, of good moral character, and have a good general education. In some States it is provided that he shall never have been convicted of a felony.‡

Removal to Another State.—There seems to be very little disposition manifested in the statute laws of the various States to facilitate the moving of a regularly licensed physician from one State to another. Several of the States make special arrangements for licensing regularly qualified physicians of sister States who change their residence and practice to those States, but in each case satisfactory evidence is required of the same or a similar degree of proficiency as that established to entitle other candidates to practise within the particular State.

Proving Diploma.—Whenever a candidate is admitted to practise medicine and surgery by virtue of a diploma, it is usually necessary for him to submit the diploma to some board appointed for the purpose of passing upon the qualifications of candidates, together with an affidavit that he is the lawful possessor of such diploma, that he has attended the full course of study

required for the degree, and that he is the person named in the diploma.

Issuing and Filing Certificate or License.—If upon examination of the papers submitted the board finds that the candidate has fulfilled the requirements of the law, they issue a certificate showing him to be entitled to practise medicine and surgery within that particular county or State. If the candidate is admitted upon examination, a like certificate is issued. In either case the law usually provides that this certificate shall be filed with some county officer in the county in which the physician resides and practises. The filing of this certificate with the county officer designated is an essential part of the requirements, and a physician is not entitled to practise and receive the benefits thereof until his certificate is so filed. The law generally provides that in case a physician removes to some county other than that in which he first filed his certificate he shall file a properly authenticated copy of the certificate in the county to which he removes; this copy will ordinarily be furnished by the officer with whom the certificate is originally filed upon the payment of a small fee.*

Enforcement of the Law.—In a very few States no penalty is prescribed for a violation of the law, but in nearly all States the law is enforced by fines, usually with an alternative penalty of imprisonment, and sometimes by fine and imprisonment conjunctively. The amount of the fine and the duration of the imprisonment is largely discretionary with the court, certain limits being prescribed for his direction, fixing the minimum and maximum amount of fine to be imposed and designating the longest and shortest periods of imprisonment to which the offender shall be committed. The smallest amount of fine fixed by any State is ten dollars, and the largest amount allowed to be imposed in any is five hundred dollars; the extreme periods of imprisonment vary from ten days to one year. In a few States, however, the payment of the fine is enforced by imprisonment until paid.

Recovery of Fee prohibited by Statute.—The statutes of several States expressly provide that any physician practising medicine unlawfully shall not be permitted to recover any fee or compensation for his services.† The right of the physician to recover for such services in States where there is no express prohibition of recovery has been the subject of judicial determination, and is fully treated in Chapter VI of this work.

Privileges to Non-resident Physicians. While every physician is, or at least ought to be, familiar with the statutes regulating the practice of medicine and surgery in his own State, it is also greatly to his interest to be informed upon the laws of the neighboring States, at least so far as they extend privileges to him as a legally qualified practitioner of a sister State.

Privilege of Attending Cases. The States of Connecticut, District of Columbia, Indiana, Kentucky, Maine, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, and Rhode Island accord to non-resident physicians and surgeons the privilege of practicing within each State, but they are not permitted in any case to maintain an office or have a place for meeting patients exclusively within such

* In Indiana, if the college issuing the diploma pretends to be not recognized as maintaining a sufficiently high standard of medical education, the applicant shall have the privilege of being examined as to his qualifications to practise medicine and surgery.

† In Oklahoma Territory, the candidate may be admitted upon examination if he has been actually engaged in the practice of medicine not less than five years.

‡ A felony may be generally defined as an offense that is punishable by capital punishment or by being imprisoned in the State prison.

* A physician of the State of California who practices in other counties without having his certificate filed in such other counties will be considered as practicing without license.

† Such provisions exist in Alabama, Georgia, Kentucky, Louisiana, Maryland, Michigan, Nebraska, North Carolina, Rhode Island, Virginia, and West Virginia.

States. In several of these States* the non-resident physicians' visits are restricted to "a particular case." The exact meaning of this restriction does not seem to have been judicially determined.

Before exercising the privilege in Mississippi the practitioner must procure a license from the State board of health, which license is granted to him without examination, and as a matter of right, upon his showing himself to be a legally qualified practitioner of another State. The privilege given by Indiana, New Hampshire, New York, Ohio, and Pennsylvania is restricted to physicians living "on the border of a neighboring State." The law of New Hampshire, however, permits non-resident physicians, irrespective of their place of residence, to attend their regular patients while sojourning in the State; it also allows landlords of summer hotels to employ physicians unlicensed in the State as hotel physicians to care for their guests or employees. New Jersey allows a physician of another State to take temporary charge of the practice of a physician of that State, a written request being first made to the State board of medical examiners.

Privilege of Consultation.—It is expressly provided that legally qualified physicians and surgeons from other States may meet in consultation with resident physicians in twenty-four States, to wit: Connecticut, Delaware, District of Columbia, Georgia, Idaho, Indiana, Louisiana, Maryland, Minnesota, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Carolina, Tennessee, Utah, Virginia, West Virginia, and Wisconsin. The law of Georgia restricts such consultation to "a special case," and expressly provides that a non-resident physician shall not be permitted to engage in a continuous practice or consultation in connection with a resident physician or surgeon.

It will be observed that not all of the States which allow non-residents to attend patients within their borders expressly give them the right to meet resident physicians in consultation; but applying the general maxim of law, *Major continet in se minorem*, it may be stated generally that any non-resident physician having the right to enter a State to practise medicine has also the right to meet a resident physician there in consultation.

(To be continued.)

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

(Meeting of November 9, 1898.)

The President, Dr. WALTER B. JOHNSON, in the Chair.

Fracture of the Neck of the Femur.—Dr. FIELDING LEWIS TAYLOR presented the following case. (See page 86.)

Dr. RAMON GUITÉRAS asked how long after the accident did he see her.

Dr. TAYLOR said he saw her the next day. The shortening was not apparent for some days. This was

* In Kentucky, Maine, Massachusetts, and Rhode Island, the visit is restricted to a "particular case"; in Kentucky, to a "particular case or family"; in the District of Columbia, such physicians are permitted to attend "specified cases."

said to rather indicate fracture of the small part of the neck. After the bandages were taken off she had an attack of synovitis of the knee, probably due to the long-continued extension in a patient subject to rheumatic attacks.

Dr. GUITÉRAS asked the speaker to what he attributed the success of the cure in that case.

Dr. TAYLOR said principally to sustaining the woman's strength by massage, so as to enable her to stand the long confinement to bed, and also to the use of lateral sand bags, which tended to prevent false motion between the fragments.

Dr. GUITÉRAS asked how long he kept the buck on.

Dr. TAYLOR said he kept it on about a month; he did not care to move it earlier, as the patient seemed to be getting on comfortably. When the extension apparatus was removed the union was not yet firm.

A Perineal Cannula.—Dr. GUITÉRAS presented a perineal cannula. This instrument was about four inches and a half long, and pointed at the distal end; at the proximal end it had a handle on its lower aspect, and extending along the whole upper surface was a groove in which a knife could be run or passed. This perineal cannula was used in cases of tight stricture, where it was difficult to get into the bladder, and where nothing could be passed by the stricture. The method of doing this was by introducing the finger into the rectum and pressing its end against the apex of the prostate, then this cannula or trocar was run through the perineum, so that it could be felt passing by the end of the finger and entering into the prostatic urethra. The stylet was then removed and the urine escaped through the cannula, showing that the instrument was in the bladder, and by running a knife along the groove an incision could be made into that viscus. A grooved director could then be pushed in along the groove of the instrument, and the opening could be enlarged accordingly. The remainder of the operation in cases of stricture was performed in the usual manner. It simply took the place of the blind stabbing that one did with the knife in cases of retention of urine, and presented a certain guide for opening the bladder. Often in doing a perineal section it was difficult to strike the bladder, and finally, perhaps, one opened the prostatic urethra with the tip of the knife, the urine escaped, the bladder collapsed, and then it was almost impossible to enter the organ. He thought it was a very important thing to have a guide in finding the bladder, and it was not a good thing to enter around blindly in the perineum.

Dr. W. L. BAKER asked how the instrument differed from the one he had presented years ago.

Dr. GUITÉRAS said that the handle was placed on the stylet antero-posteriorly instead of laterally, and also that the former was not long enough. In fatty perineums there was quite a distance from the perineum to the bladder. It was sometimes necessary to insert the finger through the perineal wound for three inches before being able to enter the neck of the bladder.

Dr. BROOKS H. WELLS thought the instrument might be useful in other portions of the body than the perineum. It was practically a grooved director, and at the same time was a cannula allowing the escape of pus. It embodied an ingenious idea.

An Imbedded Pessary removed from a Vagina.—Dr. WELLS presented a specimen which was similar to one he had shown the society several years ago. It was an unusually large, old-fashioned, hard-rubber ring pessary, which had been removed from the vagina of a

woman six years after the menopause. She had suffered from a discharge which had led to the suspicion of cancer, but on examination the pessary had been found, having been put there at some previous time; she did not know when. Partly because of the incrustation of salts and partly from natural atrophy, the vagina had ulcerated and contracted around the ring of the pessary, so that it had almost been completely imbedded in the vaginal walls. These imbedded pessaries had been found quite often ten years ago, but nowadays they were quite a rarity.

(To be concluded.)

Book Notices.

System of Diseases of the Eye. By American, British, Dutch, French, German, and Spanish Authors. Edited by WILLIAM F. NORRIS, A. M., M. D., and CHARLES A. OLIVER, A. M., M. D., of Philadelphia. Volume III. Local Diseases, Glaucoma, Wounds and Injuries, Operations. With Fifty Full-page Plates and One Hundred and Eighty-six Text Illustrations. Philadelphia: J. B. Lippincott Company, 1898. Pp. xii-3 to 962.

THIS volume is probably the most practical of the *System*, inasmuch as it deals with the clinical aspect of the subject. There are fourteen papers in the volume, eight by American, three by British, and three by German authors, and they cover most of the ground of clinical ophthalmology, except diseases of the cornea and of the lens and anomalies of the ocular muscles. A review of all the subjects treated of in the volume is impossible within the limits allotted to the reviewer in the pages of a journal of general medicine.

The first article is by Dr. Bull, on Diseases of the Orbit. The subject is treated exhaustively, but is not illustrated. A large portion of the paper is devoted to the subject of orbital tumors, and Dr. Bull makes the emphatic statement that in the case of malignant, non-encapsulated tumors repeated operations undoubtedly shorten the life of the patient.

The second and third articles are by Dr. Harlan, on Diseases of the Eyelids, and The Operations performed on the Eyelids, and give a clear and detailed account of the whole subject. The exposition of the surgery of blepharoplasty is particularly satisfactory.

The fourth article, on Diseases of the Lacrymal Apparatus, is by Dr. Theobald, a recognized authority on the subject, and is well illustrated.

The fifth article, by Dr. Burnett, on Diseases of the Conjunctiva and Sclera, is of value inasmuch as it brings down to the present time what is known of the influence of micro-organisms in atiology. Among other interesting curiosities, he refers to the production of astigmatism by pterygium and the consequent necessity of an early operation for its removal.

The sixth article, on Diseases of the Iris and Ciliary Body, is by Bradley and Stephenson, and the seventh, on Diseases of the Choroid and Vitreous, is by Gräff. They are both well worth careful reading, especially what Dr. Gräff has to say on the differential diagnosis of choroidal tumors. He agrees with Fuchs that the stage at which the eye is enucleated has little to do with the occurrence of metastasis.

The eighth article, by Schnabel, on the Anatomy of Staphyloma Posticum and its Relationship to Myopia, is of great interest. He holds with Edward Jaeger that conus is a congenital anomaly and may exist, as we all know, in emmetropia and hypermetropia, as well as in myopia; and that it has no necessary connection with posterior sclerotic-chorioiditis, so called. Hence there is no danger of macular chorio-retinitis occurring in primarily emmetropic eyes which have subsequently acquired myopia.

The ninth article, on Diseases of the Retina, is by Schoelb, and is a long and exhaustive presentation of an important subject, especially in the matter of detachment of the retina.

The tenth article is on Diseases of the Optic Nerve, by Deyl, who does not consider Leber's theory as to the causation of choked disc sufficiently substantiated. One criticism that may be made on this paper is to call attention to the insufficient space given to atrophy of the optic nerve.

The eleventh article, on Glaucoma, is by Priestley Smith. As is well known, he advises iridectomy in simple chronic glaucoma, with the addition of a scleral puncture, and believes in operating as long as there is any vision left. He admits, however, that the result is in the majority of cases problematical, and that any improvement in the vision is almost hopeless. He considers also that but little can be expected from medicinal measures.

The twelfth article is by Dr. Grüening, on Wounds and Injuries of the Eyeball, a wide subject, but well handled in the comparatively brief space allotted to it. The same may be said of the next paper, on Sympathetic Ophthalmia, by Dr. Randolph.

The fourteenth and final article of the volume is by Dr. Knapp, on the Operations Usually Performed in Ophthalmic Surgery. A large portion of this article is devoted to the subject of cataract and the operations for its relief, and the author's remarks are eminently wise and judicious. The remarks on tenotomy for the relief of muscular asthenopia are brief but just.

It is to be hoped that the long delay in the appearance of this volume will not occur in the appearance of the fourth and concluding volume of the *System*.

Mittheilungen aus der Augenklinik des carolinischen medico-chirurgischen Instituts zu Stockholm. Herausgegeben von Dr. J. WIDMARK, Professor der Augenheilkunde am carolinischen medico-chirurgischen Institut zu Stockholm. Erstes Heft. Mit einer Tafel und vier Abbildungen im Text. Jena: Gustav Fischer, 1898. Pp. 251. [Preis, 7 Marks.]

THIS brochure consists of a series of six articles, four of them by Dr. Widmark, all previously published in various Scandinavian journals.

The first article is entitled The Position of the Pupillo-muscular Bundles of Nerve Fibres in the Optic Tract, by Dr. Widmark, and the cases to which he alludes are based upon one case. He believes that by his observations on this case he is able to explain the different results obtained by A. J. L. F. and Bunge. At the same time, as to the question, in his case, the bundle of nerve fibres was not, as described by Bunge and Fuchs, which he says, that the bundle of fibres occupied the posterior part of the optic tract, he thinks that the difference may be explained by the fact that

Vossius examined the tract higher up than Uthoff and Bunge. He confirms the observations of Bunge and Henschen that the bundle between the chiasm and the cerebral peduncle occupies a central position in the tract.

The second paper is also by Widmark, and consists of statistical observations on myopia among school children and students, which seem to bear out the statement that the increase of myopia is more marked in girls than in boys.

The third paper is by Widmark, on The Limit of the Visible Spectrum from the Violet End, and he draws the following conclusions: 1. The normal human eye can perceive only a small portion of the ultra-violet rays. The limit of the visible spectrum varies in different individuals, but lies within the limits of L-M, and only exceptionally outside of these lines. 2. The rays are directly perceptible, and not by fluorescence. 3. They are perceived more readily eccentrically than centrally. 4. Elderly persons perceive a smaller portion of the ultra-violet rays than younger persons. This difference is but little noticeable up to the fifty-fifth year, but after the sixty-fourth year it becomes marked. The limit of the visible spectrum after this period usually lies within the violet field. 5. The reason for this slight power of the human eye to recognize the ultra-violet rays lies mainly in the absorption through the lens, and if the lens is removed a much greater portion of these rays will be perceived, as is frequently observed in patients operated on for cataract.

The fourth paper is by Dalén, on Experimental Observations on the Disinfection of the Conjunctival Sac, and will prove of great interest to the surgeon and bacteriologist.

The fifth paper, The Mechanical and Therapeutical Treatment of Trachoma, is by Hellgren. In it are presented at considerable length the various surgical procedures now employed in the treatment of this disease.

The sixth and final paper is by Widmark, on The Operative Treatment of Immature and Partial Stationary Cataracts. This is a long and carefully considered statement of a subject of great interest to the ophthalmic surgeon, based on observations by the author and other writers, and will well repay perusal.

Ophthalmic Diseases and Therapeutics. By A. B. NORTON, M. D., Professor of Ophthalmology in the College of the New York Ophthalmic Hospital, etc. With Ninety Illustrations and Eighteen Chromolithographic Figures. Second edition, revised and enlarged. Philadelphia: Boericke & Tafel, 1898. Pp. xiii-17 to 647.

THIS is a volume in which 138 pages are devoted to an account of the drugs employed by the author in ophthalmic practice.

The first four chapters, covering 82 pages, deal with the methods employed in examining the eye, with the use of the ophthalmoscope, with the great subject of refraction and accommodation, and with dioptry. Then follow chapters on the various diseases of the eye, including the affections of the muscles. The author's pathology is at times faulty, and far too much importance is laid upon the administration of drugs, and far too little attention is given to surgical treatment, either for the relief of deformities or for the cure of diseased conditions. In the chapter on diseases of the laryngeal apparatus no mention is made of Theobald's probes for the cure of stricture of the duct.

The author states that empyema of the frontal sinus is extremely rare, but this is not the experience of the modern ophthalmologist.

Very little space is given to the consideration of the modern ideas of strabismus, and simple tenotomy of one or both internal recti muscles will fail to effect a cure in the majority of cases. The author protests most emphatically against the prevalent operation of graduated tenotomies for the relief of heterophoria, and in this he seems to be in accord with many of the best observers.

The author has a modified belief in the efficacy of the treatment of cataract by the administration of drugs according to the homeopathic law. "But after degeneration of the lens fibres has taken place, no remedy will be found of avail in restoring the lost transparency of the lens."

The colored lithographs are good, but some of the black-and-white illustrations are poorly done. There is a fairly good index and there is a brief bibliography. The book is well printed on good paper.

A Text-book of Physiological Chemistry. By OLOF HAMMARSTEN, Professor of Medical and Physiological Chemistry in the University of Upsala. Authorized Translation from the Author's Enlarged and Revised Third German Edition by JOHN A. MANDEL, Professor of Inorganic Chemistry and Physics, and Adjunct Professor of Physiological Chemistry in the University and Bellevue Hospital Medical College. Second Edition. First Thousand. New York: John Wiley & Sons. London: Chapman & Hill, 1898. Pp. x-705.

THE changes in the second American edition of this admirable work, as compared with the first, are few. The foods have been more amply considered, as was necessary, and the revision throughout has been that which advances in the study of physiological chemistry have required. One innovation in this edition is the inclusion of a reference bibliography, the importance of which is self-evident. The work is exhaustive and authoritative, and can not but meet with appreciation. It is not one which may be read for pleasure, and in this respect perhaps it suffers by comparison with such a book as Bunge's work upon the same subject, but, on the other hand, it will be consulted and referred to with the comforting knowledge that no work is its superior in the field of which it treats.

A Treatise on Diseases of the Ear, together with a Brief Sketch of the Anatomy and Physiology of this Organ. By ALBERT H. BUCK, M. D., Clinical Professor of the Diseases of the Ear, College of Physicians and Surgeons, New York, etc. Third Revised Edition. New York: William Wood and Company, 1898. Pp. xii-592. [Price, \$3.50.]

So many works of this kind have recently appeared that it is difficult to present within the columns of a weekly journal a critical review which tells in a brief compass in just what particulars one manual differs from another. Suffice it to say that the one now under discussion is the presentation of long years of clinical experience by one who has had unusually good opportunities for observation and has improved them to the utmost. Three editions tell more than mere words can. The author is an "expansionist" in regard to the limits of otology, which have in recent years, he declares, been

enlarged by the annexation of the larger part of the domain of rhinology, and more lately by that of a localized portion of brain surgery, reference being made to the otitic origin of many intracranial diseases.

The present edition takes full note of this advance. The chapter on affections of the nasal cavities and the vault of the pharynx is written by Dr. Robert Lewis, and is unusually clear and lucid. Print and paper are excellent, and the book as a whole presents an attractive appearance.

We are inclined to believe that some of the rhinologists will be apt to take exception to the statement that otology has absorbed a large part of their domain. So far as practice here in New York is concerned, many rhinologists have taken up ear work and prosecuted it with success. However, argument on this point is not necessary.

One feature of the present volume which we would heartily commend is the author's judicious use of the clinical material which has come under his own notice. This is employed in the shape of brief histories, etc., which well illustrate the writer's various propositions.

Clinical Lectures on Mental Diseases. By T. S. CLouston, M. D. Edin., F. R. C. P. E., Physician Superintendent of the Royal Edinburgh Asylum for the Insane, etc. Fifth Edition. Philadelphia: Lea Brothers & Co., 1898. Pp. xii+727. [Price, \$4.25.]

THESE lectures are so well known and so highly esteemed that the appearance of a fifth edition of the work is as much a matter of course as that of the sixth, seventh, and doubtless many more will be. As is well known, the work is a very admirable one, erring, if at all, in being too conservative. This, however, is a fault in the right direction, and one is not likely to go amiss in following the teachings of Dr. Clouston. So far as alterations in the book are concerned, but few are apparent in the fifth edition; the most noticeable are a few fairly well executed illustrations.

Nursing: its Principles and Practice. For Hospital and Private Use. By ISABEL ADAMS HAMPTON, Late Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital, Baltimore, etc. Revised and enlarged. Illustrated. Philadelphia: W. B. Saunders, 1898. Pp. 6 to 512.

WE heartily commend this very excellent text-book to those concerned in the education and training of nurses. Its character has been described before. Of the second edition it is sufficient to say that it does not differ materially from the first.

Material Medica, Pharmacy, Pharmacology, and Therapeutics. By W. HALE WHITE, M. D., F. R. C. P., Physician to and Lecturer on Pharmacology and Therapeutics at Guy's Hospital, London, etc. Edited by REYNOLD W. WILSON, M. A., M. D., LL. D., Professor of Medicine and Therapeutics at the New York Post-graduate Medical School, etc. Fourth American Edition, thoroughly revised. Philadelphia: P. Blakiston's Son & Co., 1898. Pp. 8 to 704. [Price, \$3.]

THE well-deserved success this book has had is not likely to suffer diminution from any fault of the fourth American edition. Such revision as pharmacological

progress has demanded has been conscientiously done, and the work is an admirable and useful presentation of a none too easy subject. For these reasons the popularity of the book with teachers is not to be wondered at.

1. *Handbook of Hygiene and Sanitary Science.* By GEORGE WILSON, M. A., M. D., LL. D. Edin., F. R. S. Edin., D. P. H. Camb., Fellow of the Sanitary Institute of Great Britain, etc. Eighth Edition. London: J. & A. Churchill, Philadelphia: P. Blakiston's Son & Co., 1898. Pp. xxvii+798. [Price, \$3.]

WHEN a work such as this has reached an eighth edition the task of the reviewer can be but perfunctory. That the book has always kept pace with the developments of sanitary science is well known, and the latest edition is renewed evidence of the zeal and conscientiousness of the author. To those familiar with the book in its earlier editions it will appear that a considerable revision has been done, few of the chapters having escaped, and it will also appear that the book represents all that is newest and best in sanitary knowledge. It is true that much of the author's expressed skepticism upon serum treatment and immunization will not meet with general concurrence, but, while he is bacteriologically somewhat of a pessimist, he can not be accused of insincerity or of having arrived at his discouraging conclusions without mature reflection upon evidence which to him has been sufficiently convincing.

BOOKS, ETC., RECEIVED.

The Practice of Obstetrics. By American Authors. Edited by Charles Jewett, M. D., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital. Illustrated with Four Hundred and Forty-one Engravings, Thirty-four of which are in Colors, and Twenty-two Colored Plates. New York and Philadelphia: Lea Brothers & Co., 1899. Pp. xiii+1; to 768. [Price, \$5.]

A Manual of Bacteriology. By Herbert C. Williams, M. D., Professor of Pathology and Bacteriology, Medical Department, University of Buffalo. With Seventy-eight Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. x + 10 to 263. [Price, \$1.50.]

Puerto Rico and its Resources. By Frederick A. Ober, Author of *Camps in the Caribbees*, *Travels in Mexico*, etc. With Maps and Illustrations. New York: D. Appleton and Company, 1899. Pp. xiii + 282. [Price, \$1.50.]

Organothérapie ou opothérapie. Par le Dr. C. Hillemand, Ancien interne des hôpitaux de Paris, etc. Paris: G. Steinheil, 1899. [Prix, 0 fr. 75.]

Formulaire des médicaments nouveaux pour 1899. Par H. Boespillon-Lamouin, Membre des sociétés de pharmacie et de thérapeutique, etc. Avec une introduction par Henri Huchard, Membre de l'Académie de médecine. Paris: J. B. Baillière et C^s, 1899. Pp. viii+9 to 332.

Illinois State Board of Health. Appendix to the
Twentieth Annual Report, 1897.

The Sixth Annual Report of the Maryland Asylum,
Baltimore, 1893

Diseases of the Ear as a Specialty. By F. M. Anderson, M. D., of Detroit. [Report of the Otorhinolaryngological Surgeon.]

Assigned Dates: 1994-1995, 1996, 1997, and 1998
 Recognition: By J. A. C. G. (1994), M. D. (1995), and
 from the *Hebrew Bible* (1996)

Diseases of the Alimentary Canal.—Treatment. By James Osborne De Courcy, M. D. Read before the St. Clair County, Illinois, Medical Society, June 7, 1894.

Sanitarium Treatment of Pulmonary Tuberculosis. By J. Edward Stubbert, M. D., and Stephen W. Wells, M. D., of Liberty, N. Y. [Reprinted from the *St. Louis Medical Gazette*.]

Chronic Inflammation of the Pharyngeal Tonsil, with Little Hypertrophy. By Charles N. Cox, M. D., of Brooklyn. [Reprinted from the *Annals of Otolaryngology, and Laryngology*.]

Coloring Matters and Ferments. By J. F. Peavy, M. D., of Asheville, North Carolina. [Reprinted from the *Journal of the American Medical Association*.]

Die Prophylaxe der Sepsis bei Laparotomien und bei Eingriffen am Uterus. Von Dr. B. Credé. [Separat-Abdruck aus der *Monatsschrift für Geburtshülfe und Gynäkologie*.]

Bericht über die Anwendung der physikalischen Heilmethoden auf der I. medicinischen Klinik und Poliklinik. Von Dr. von Leyden und Dr. Paul Jacob. [Sonder-Abdruck aus den *Charité-Annalen*.]

Bleeding Polyp of the Septum (Telangiectoma). By George L. Richards, M. D. [Reprinted from the *Laryngoscope*.]

Illustrative Cases of Prostatitis. By L. Bolton Bangs, M. D. [Reprinted from the *New England Medical Monthly*.]

Some Remarks about the Study of Medicine in Germany. By Emil Amberg, M. D., of Detroit. [Reprinted from the *Leucocyte*.]

Hernia of the Ovary. By B. Bernard Browne, M. D., of Baltimore. [Reprinted from the *Gynecological Transactions*.]

New Inventions, etc.

A NEW OPHTHALMOSCOPE.

By GEORGE M. GOULD, M. D.,
PHILADELPHIA.

THE illustrations herewith given of a new ophthalmoscope are of the same size as the instrument, and present views of the anterior and posterior surfaces. In the following points the device seems superior to others.

1. The absence of the Rekoss disc. The lenses are arranged in two series, those most used at one end, and the higher numbers, both plus and minus, at the other. The arrangement may be changed so that a surgeon with high ametropia, except in rare instances, will still seldom be compelled to transfer the mirror so as to use the high-power lenses. The transfer, however, requires but an instant.

2. There are sixty lenses, all the lower powers proceeding from zero by 0.5 D. intervals; the highest minus lens being 10 D., the highest plus, 30 D.

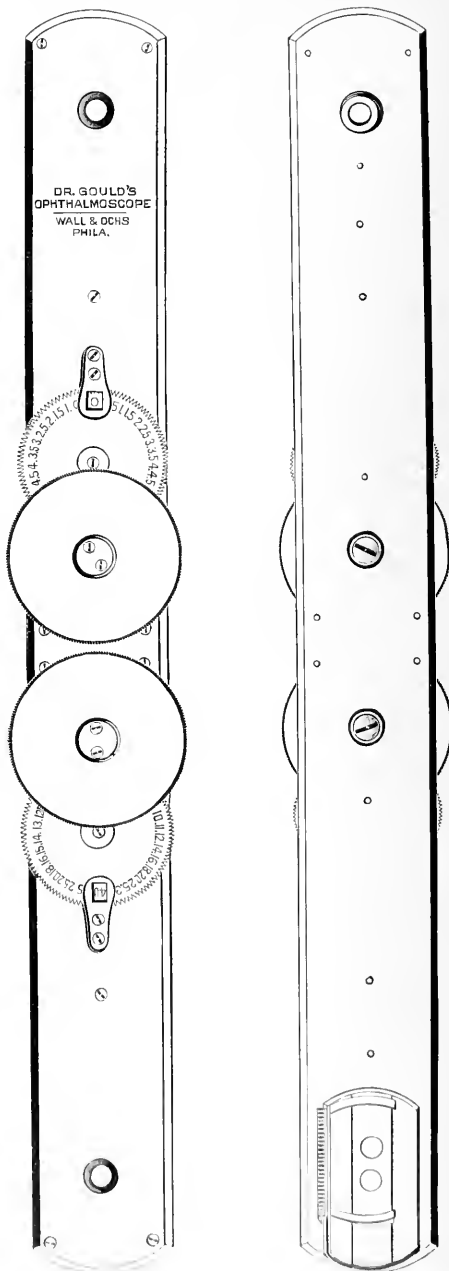
3. The absence of a handle, the instrument itself, when used, being grasped by the hand.

4. The mirror is turned at any angle so that examination of an eye is easy whatever the position of the patient's head.

5. The light hole is protected from side light, thus increasing the perfection of the illumination.

6. The side light hole, by an ingenious device, can at pleasure be made large or small.

7. No case is required, the instrument, though light, being so strong and durable that it may be slipped into the pocket, or with other things into the hand bag.



8. Correspondence concerning the ophthalmoscope should be addressed to the manufacturers, Messrs. Wall & Ochs, 1716 Chestnut Street, Philadelphia.

Miscellany.

The Nutritive Value of Sugar.—The *Lyon médical* for December 18th, quoting *Médecine moderne* for October 3d, says that there has recently been made in the German army during the manoeuvres a series of interesting experiments upon the nutritive and tonic properties of sugar.

Ten men were chosen from each company from among the least vigorous as subjects of experiment, and ten others were used as checks. The former received at first ten lumps of sugar daily; then the daily ration was progressively raised to ten and twelve lumps. The results were as follows: During the manoeuvres the weight of the men dieted with sugar increased in a greater proportion than that of the others. They were at the same time in better health and more vigorous than prior to the experiments. On a march a lump of sugar appeased both hunger and thirst. Fatigue and insolation were easily combated by the aid of this article.

In consequence of these experiments, M. Leitenstorfer, under whose direction they were made, proposes to introduce sugar into the military dietary in three different ways: 1. As a supplementary article to improve the daily ration of the soldier. 2. As an integral part of the reserve supplies and provisions of strongholds, hospitals, and ships. 3. As a temporary ration to strengthen the soldiers and to sustain their vigor while on the march.

The *Revue scientifique*, which gives a résumé of the experiments made by M. Leitenstorfer, adds that sugar appears to be indicated to replace alcohol or wine under the various conditions when it is commonly considered desirable to include the latter in rations. Sugar, it says, affords, in short, the same stimulation as alcohol, but without any danger. It has, moreover, the incontestable advantage of being a muscular aliment of the first rank, combating and at the same time preventing fatigue.

Glycosuria cured in Twenty-eight Days.—Dr. Michaux (*Doximétrie*, October; *Lyon médical*, December 18th) reports the case of a man of fifty-eight who in eight months had lost fourteen pounds in weight following upon digestive troubles. Analysis of his urine disclosed six hundred grains of sugar to the quart. No indication was given of the quantity of urine passed in twenty-four hours.

The regimen was left unchanged, but the patient was given (daily?) four granules, containing each one hundred and twentieth of a grain of arsenate of strychnine, a sixtieth of a grain of arsenate of iron, a third of a grain of benzoate of lithia, and a sixtieth of a grain of quassine. This treatment was continued without interruption from August 24th to September 24th. All the functional troubles have disappeared, and there is no trace of sugar from the urine.

The Infection of Man with the Hoof-and-Mouth Disease.—According to the *Pharmaceutical Journal* for June 1st, quoted by the *Journal of Comparative Medicine and Veterinary Archives* for December, an attack of

the slaughterhouse in Dresden was infected in the following manner with hoof-and-mouth disease, while caring for an infected herd: He was smoking at his work and touched his cigar with his dirty hands. He was afterward seized with a violent fever, and blisters appeared in his mouth and on his toes. The man was unable to work for a week. In the neighborhood of Zabern, moreover, two milkmaids were similarly afflicted after they had drunk from a milk bucket the milk of cows which had not yet fully recovered from the aphtha contagion.

A Distinction with a Difference.—The *Sanitary Inspector* for December says that a comical little anti-vaccination paper states that "disease germs only thrive where disease exists"; nevertheless, various trustworthy observers have found the bacillus of diphtheria in the throats of children in good health of whom some developed diphtheria a few days later after the germs had had time to thrive and proliferate enough of their specific toxin to poison the system. Those who would teach the truth should say: "Infectious diseases exist only where disease germs thrive."

Odor as a Symptom of Disease.—Dr. J. H. McCassey (*Medical Age*, December 27th) says that diseases have their characteristic odors. Persons who have visited many insane asylums recognize the same familiar odor of the insane. General paresis of the insane affords us a typical example. It is a true cerebral disease, physiologically, pathologically, and psychologically. In it the substances of the convolutions of the brain undergo a process of degeneration or atrophy, which finally invades the whole nervous system. The nerve and mind tissue die slowly and progressively. The blood current carries the waste tissue to the lungs for aeration, and the result is the foul, characteristic odor of this disease.

It is not insane asylums alone, but prisons, jails, workhouses, armies in camp, churches, schools, and nearly every household, that have their characteristic odors. It is when the insane, the prisoners, and the soldiers are aggregated in large groups or battalions that their characteristic odor is recognized by our much-neglected "sneller."

As said before, many diseases have characteristic odors, and by the exercise of the sense of smell they could be utilized in differential diagnosis. For example, favus has a mousey odor; rheumatism has a copious, sour-smelling, acid sweat. A person afflicted with pyæmia has a sweet, nauseating breath. The rank, unbearable odor of pus from the middle ear tells the tale of the decay of osseous tissue. In scurvy the odor is putrid; in chronic peritonitis, musky; in syphilis, sweet; in scrofula, like stale beer; in intermittent fever, like fresh-baked brown bread; in fevers, ammoniacal; in hysteria, like violets or pineapples. Measles, diphtheria, typhoid fever, epilepsy, phthisis, etc., have characteristic odors.

A Mummified Fetus expelled Three Days after Accouchement.—M. Bendaan and M. Bendaan (*Indépendance médicale*, December 21st) have recently to the Obstetrical Society of Paris (of which) a primipara expelled during a violent contraction a mummified fetus three days after a normal delivery. Rad ceraphy showed that the mummified fetus was in a contracted form, which accords with the fact that it was expelled three days after a normal delivery. The mummified fetus was ten months in the uterus. The mother was healthy and the mummified fetus was expelled after three days.

other, notwithstanding, continued to develop to term. Examination of the placenta showed nothing abnormal.

The Alcohol Question and Hospital Physicians.—M. Legendre (*Indépendance médicale*, December 21st), in a communication to the *Société médicale des hôpitaux*, thinks that hospital physicians can exercise great influence in the struggle against alcoholism. He has had printed a brochure setting forth all the evil effects of the abuse of alcohol and of the alcoholic mania, a copy of which brochure is given to every patient on his entry into the hospital.

Endermol.—This new remedy, according to the *Druggists' Circular and Chemical Gazette* for December, is nicotine salicylate. It crystallizes in tablets, melting at 117.5°, and is free from water. It contains seventy-five per cent. of the alkaloid.

Orthoform in the Treatment of Fissures of the Nipple.—L. Toiséire (*Thèse de Paris*, 1898; *Presse médicale*, December 21th) regards orthoform as an excellent local anæsthetic and to some extent an antiseptic. It may be applied to fissures of the nipple by insufflation or spread in a thin layer on a compress. Before each nursing, it is to be washed off with a boric-acid solution. He has observed excellent results from its employment.

Pneumatic Gymnastics; a New Method of Treatment of Gastric Myasthenia.—This was the title of a very interesting paper read by Dr. Fenton B. Turck, of Chicago, before the Section of Pharmacology and Therapeutics at the sixty-sixth annual meeting of the British Medical Association in Edinburgh, July, 1898. An abstract of it was published in the *British Medical Journal* for October 29th, the substance of which, amplified from the author's manuscript, is as follows: Notwithstanding some recent surgical achievements that might be interpreted as indicating the contrary, Dr. Turck thought the stomach was still to be considered as one of the most important of all the viscera. Its function, however, was largely a mechanical one; it was a temporary receptacle for the ingested food; in it, together with a certain amount of chemical digestion, the latter was subjected to the churning and mincing process that prepared it for its further treatment and absorption in the intestine. It was this motor function of the stomach that gave it its chief importance, and when it was deranged there was a condition of gastric weakness, or myasthenia, and there were commonly, as attendants or results, extensive disturbances of other organs, and, in short, the whole complex phenomena of dyspepsia and its concomitant disorders. The treatment of this gastric myasthenia had so far been more palliative than directly curative; the distressing symptoms had been relieved so far as possible, and the organ put into a condition more to allow Nature to do her work of restoration than to assist actively in the process. When matters were not so bad that this *vis medicatrix Nature* was not seriously embarrassed or even altogether obstructed, Dr. Turck said, this plan was effective in the course of a period of time, long enough at the very least, and often altogether too long, for the comfort, economy, and even the best welfare of the patient.

Dr. Turck placed these methods of treatment in the following order:

1. Diet, which might be palliative, but was not in itself a curative measure. As affording Nature a chance, as well as relieving one of the more distressing symp-

toms, it might be relatively efficient, but it did not meet the requirements of an actual remedy.

2. Lavage. This was often palliative and might even have a slight curative action in mild cases, but in many others it only increased the muscular asthenia and led to more rapid emaciation.

3. Baths.

4. General gymnastics could not directly act on the stomach, and their effectiveness was only in their general action on the system. They were, therefore, only auxiliaries of uncertain value, aids to Nature, it might be, in her efforts to throw off disease, but requiring careful oversight and good judgment in their management in any particular case. They were not essentially, but only incidentally or accidentally, remedial, and might be even damaging under certain conditions.

5. Electricity had been very strongly advocated in quite recent publications as a remedy for gastric dilatation and myasthenia, and would appear at first sight to be a rational one. One of its disadvantages was the difficulty of its uniform and equable application. The electrode, whether applied externally or internally, could only direct the current in a haphazard manner as regarded the musculature, and, besides this, there was, as the result of careful experimentation, a serious doubt as to the efficacy of the current in provoking muscular contractions through the gastric mucosa at all. Taking both these facts together, the difficulty of systematic electrization, and the serious doubt as to the real efficacy of this method, it was left in a rather unsatisfactory position, and could not in any event be admitted as completely meeting the indications of a satisfactory treatment. In any event the cases reported by its advocates should have a more careful analysis than had yet been given them before their claims could be fully admitted. The mere statement of the disappearance of symptoms for an unstated period was not adequate evidence for the decision of a question such as the effectiveness of this or that remedial method or agency.

6. Drugs. These were the common resource, and were used often without any discrimination or even any recognition of the real state of affairs. While they could be rationally used sometimes for the palliation of distressing symptoms, the fact probably was that in the aggregate they did as much harm as good. There might also be a certain amount of reasonableness in giving tonics for the muscular weakness, but the remedial action must be slight at least.

7. Surgical measures, such as Bercher's operation, were, of course, only a last resort, and the most they could effect was the mechanical relief of the dilatation, not the cure of the myasthenia. They could, therefore, be left unconsidered.

Since all the hitherto available methods seemed to have their drawbacks, Dr. Turck said that he had endeavored to find one that would be at least rational in its conception, and could be practically applied without danger or serious inconvenience to the subject. General abdominal gymnastic exercises, while they might be of use, he thought, could not be directly localized on the gastric muscle, which was the part desired to be affected directly. The internal situation of the organ and the extent of its muscular walls were such that it could be uniformly exercised by one method only—that of expansion and contraction. Dr. Turck stated that he had devised for this purpose a method which he called pneumatic gymnastics, which consisted in alternating distention and contraction of the stomach by means of

regulated air pressure, which might, if desirable, be combined with other therapeutic measures, such as the introduction of hot or cold air or vapors suited for gastric treatment. The apparatus, he said, was simple, and consisted of two parallel attached rubber tubes of unequal calibre. The smaller and shorter tube, when introduced, reached just through the cardiac orifice, while the larger and longer reached the greater curvature. The air tank, or bulb, was attached to one tube, and to the other a manometer for regulating the pressure; either tube might be used as the inlet, he said, according to the conditions of the gastric muscle, but in most cases it was found more convenient and perfectly safe to use the larger tube for this purpose and to use the smaller one only in cases of very profound myasthenia, when a very free outlet was advisable. The double tube was, if anything, more readily introduced than the ordinary stomach tube, its flattened shape favoring its passage, and, while flexible, it was not so readily collapsed as a single tube of equal thickness of wall would be.

Dr. Turek further stated that he had devised a method of using dry and moist heat (vapor) in connection with pneumatic gymnastics of the stomach. The forced air, he said, passed through a heated coil controlled by a thermometer, and was allowed to pass into the stomach through a special tube. By this method the entire stomach was affected by the thermal agent, instead of only a portion, as in lavage. The moist air, on the other hand, was produced by passing the air through a rubber tube which was long enough to form a ring at the bottom of a bottle holding from three to four quarts. The end of the rubber tube inside of the bottle was closed and the air was, instead, forced out through a number of small openings made along that part of the tube which touched the bottom of the bottle. The bottle was two thirds filled with water having a temperature of about 10° C. above the temperature desired for the moist air. By this means the air rushing through the water was thoroughly saturated with water vapor, and was, at the same time, perfectly and uniformly heated. Dr. Turek said that experiments had shown that the air would pass out of the farther end of the stomach tube at a temperature approximately 10° C. below the temperature of the water in the bottle, and the temperature of the air passed into the stomach was, therefore, very perfectly regulated by simply regulating the temperature of the water in the bottle. The dry and moist heat were of great and therapeutic value, he said, used in this way under full control of the operator.

In certain cases, Dr. Turek said, in which the cardiac orifice of the esophagus did not close together around the tube, or when the pylorus remained patent, it was necessary to use a modification of the apparatus, which consisted in a light, readily inflatable rubber bag opening into both tubes, which would confine the air that would otherwise escape around the tube or pass into the intestines. Another use for the bag was in cases where it might be desirable to protect the walls of the stomach from the air introduced, which might, under certain conditions, act as an irritant, and might thus be employed at varying temperatures without fear of injury. The distended rubber bag molded itself to the shape of the stomach, and the amount of pressure was revealed by the manometer. It was perfectly under the control of the operator. When it was relieved the air was rapidly forced out by the elasticity and contractility of the stomach walls, aided by the pressure of

the gastric and abdominal muscles. In this way, Dr. Turek said, there could be produced an alternating expansion and contraction of the muscular walls, a sort of gastric passive exercise or massage that, when properly administered, had the same effect upon the muscular coats as similar manipulations did on the external muscles of the body, in so far as stimulating function and nutrition was concerned. Under ordinary conditions both the pyloric and cardiac orifices contracted as soon as moderate pressure was applied, and were relaxed as it was withdrawn, and the open outlet tube gave the air free exit. The mechanism was, therefore, he said, practically the same as that of the normal contraction and dilatation of the stomach, and this formed a natural mechanical aid in the treatment of gastric myasthenia and atony.

The action of the method of pneumatic gymnastics was, however, not limited to its simple mechanical exercising of the gastric muscle. Both local and general effects on circulation and secretion were produced, and these must have a direct or indirect influence on the nutrition and functions of the organ. While chronic atony and distention of the stomach walls could have no possible beneficial effect, alternating, or temporary, stretching of the stomach, as of other organs, acted as an excitant to the circulation. According to Bensley, said Dr. Turek, distention seemed to favor circulation, because the blood-vessels were more easily injected in a moderately distended stomach than in an empty one. The rich venous plexus of veins within the submucosa was sufficiently large to hold a considerable quantity of blood. This, he thought, must be the case when the valves within the veins coming from the stomach were temporarily closed. When the valves were closed a contraction of the circular muscle was sufficient to drive all the blood from the underlying veins. It was, therefore, possible that a rhythmic contraction of any part of the stomach might force the circulation through its walls. The arrangement of the lymphatics was much the same as that of the veins, and the consideration above mentioned applied equally well to them. Dr. Turek thought that when we considered the resistance to be overcome while the lymph passed through so many networks before the receptaculum chyli was reached, it made it plausible to state that the circulation was favored by muscular contraction.

It would be readily seen, he said, how the alternating dilatation and contraction of the gastric walls might favor local circulation. The action might be slight at first, but each application increased the nutrition of the parts and, consequently, the vigor and force of the muscular tissues. The secretion of the gastric glands must also be at least incidentally affected, if not stimulated, with the better and more regulated blood supply, thus also favoring a restoration of the atonic organ to its normal state.

The action of this method on the circulation was not altogether local, as was easily shown by the following considerations: The splanchnic area was the largest blood reservoir in the body, and sudden disturbances in the afflux or efflux of blood to or from it had most decided effects on the regulating mechanism of the heart and the circulation of the blood. This was shown by the well known phenomenon of syncope, and even the sudden emptying of a distended bladder or sudden withdrawal of ascitic fluid had been known to produce it, by the derangement of the abdominal blood supply thus induced. After section of the splanchnic nerves, in the

rabbit, the placing of the animal upon its feet might cause instant death from the afflux of blood to the abdominal organs and consequent cerebral anemia. A chronically dilated stomach, with consequent passive venous hyperemia from obstructive stasis, was a very seriously disturbing factor in the organism, and whatever could relieve it acted not only locally upon the organ itself, but on the system generally, and relieved a vast number of, perhaps, only vaguely felt but very real and important symptoms.

Dr. Turck summarized the action of pneumatic gymnastics as follows:

1. Distention (partial) of the stomach with air stretched its walls, and this was opposed by the gastric muscles themselves, those of the abdomen and the diaphragm, and by the intra-abdominal pressure.

2. The succeeding contraction was produced through the muscular apparatus noted above, and by the intra-abdominal pressure.

3. The expansion and retraction of the gastric walls acted as a stimulant and exercise to the gastric musculature and circulation (1) by causing venous outflow and filling of veins from the capillaries; (2) by the mechanical muscular contraction acting as an arterial stimulant. Secretion was also directly and incidentally modified in a normal direction.

4. Distention of the stomach with air increased the pressure within the whole abdominal cavity, causing a pressure that forced the blood out of the veins and through the portal circulation. Increase of work was thus thrown upon the heart, calling for more vigorous systolic impulse. More blood was thus forced into the portal circulation, and more blood passed through the right heart.

5. Contraction of the stomach by its own muscles and those of the diaphragm forced out the air and relieved intra-abdominal pressure. This caused the blood to flow rapidly into the splanchnic area, increasing the capillary flow. It might do this also by causing a slight negative pressure in the abdominal cavity.

6. The principle of alternately increasing and decreasing the intra-abdominal pressure by regulated gastric pneumo-gymnastics in the manner described tended also to act as an exercise for the vascular system, and to increase the tone of the splanchnic circulation.

Dr. Turck gave a detailed description of a number of experiments upon dogs in which he had demonstrated the gastric circulatory changes described in the foregoing as the effect of pneumatic gymnastics of the stomach. In every case, he said, the bluish venous congestion that preexisted had been changed to a bright arterial one by the operation, and the general circulatory and respiratory disturbances had often been suppressed and replaced by more normal conditions.

The therapeutic action of pneumatic massage was, first, to improve the motor power of the gastric musculature, as was shown by the improved condition of the gastric contents when examined, and also by the lessened time occupied by gastric digestion. It had, also, for a second effect a marked though seldom complete retraction of the dilatation, reducing the diameter of the stomach as much as four inches in some cases. Thirdly, there was with the increased power a compensatory hypertrophy of the gastric walls.

Dr. Turck further stated that a very important feature of value in this method was the general improvement in the circulation and nutrition of the patient which followed the use of pneumatic gymnastics. With

the rapid disappearance of the uncomfortable symptoms there was a marked gain in weight, in some cases amounting to ten or twelve pounds in a month.

The Atlanta Society of Medicine.—We learn from the *Atlanta Medical and Surgical Journal* for January that officers for the year 1899 have been elected as follows: President, Dr. W. S. Goldsmith; vice-president, Dr. Katherine Collins; secretary, Dr. Claude A. Smith; treasurer, Dr. E. Van Goidtsnoven; librarian, Dr. Mike Hohe.

The Medical Society of the State of New York.—The ninety-third annual meeting will be held in Albany on Tuesday, January 31st, and Wednesday and Thursday, February 1st and 2d, under the presidency of Dr. John O. Roe, of Rochester. The preliminary programme contains the following titles: The president's inaugural address, by Dr. John O. Roe; Fracture of the Cervical Vertebra, with Specimen, by Dr. Chauncey P. Biggs, of Ithaca; An Unusual Injury to the Kidney, with Specimen, by Dr. William D. Garlock, of Little Falls; Formaldehyde Disinfection, by Dr. William H. Park, of New York; The Close Relation between the Nasal and the Cranial Cavities, and between Nasal and Cranial Disease, by Dr. William C. Krauss, of Buffalo; The Importance of Early Examination and Treatment of Catarrhal Mouth Breathing in the Public Schools, by Dr. Clarence C. Rice; Some Practical Points in the Diagnosis of the more Common Forms of Nasal Obstruction, by Dr. Charles N. Cox, of Brooklyn; Intestinal Resection: Personal Experience, by Dr. William L. Cuddelback, of Port Jervis; The Dangers of the Long Tube Nursing Bottle, by Dr. Ernest Wende, of Buffalo; The Detection of Tuberculous Infection in Second-hand Clothing, by Dr. William G. Bissell, of Buffalo; The Improvement in General Anaesthesia on the Basis of Schleich's Principle of adapting the Boiling Point of the Narcotic to the Temperature of the Body, with Special Reference to Anesthol, by Dr. Willy Meyer, of New York; How to Treat Shock, by Dr. Robert H. M. Dabarn, of New York; Fever in Aseptic Surgery, by Dr. B. Farquhar Curtis, of New York; The Use of Streptococcus Antitoxine in Phlegmonous Inflammations, with a Report of a Case, by Algernon T. Bristow, of Brooklyn; Puerperal Insanity: A Cursory View for the General Practitioner, by Dr. Carlos F. Macdonald, of Pleasantville; Hygienic Camps, by Dr. Henry R. Hopkins, of Buffalo; Typhoid Fever in the Seventh Army Corps, by Dr. Henry P. De Forest, of Brooklyn; The Character and Treatment of the Gunshot Wounds in the Recent War, with a Report of Cases, by Dr. Henry B. Delafour, of Brooklyn; Cardiac Deficiency as Observed in the Soldiers of the Late War, by Dr. Henry W. Fairbairn, of Brooklyn; The Relations of Preventive Medicine to Political Economy, by Dr. George W. Brush, of Brooklyn; The Relation of the Consumptive to the State, by Dr. John H. Pryor, of Buffalo; Microscopic Projection, by Dr. William Hailes, Jr., of Albany; The X Ray from the Static Machine and Some Practical Points in Medicine and Surgery, by Dr. Louis A. Weigel, of Rochester; Skin Diseases, by Dr. Grover W. Wende, of Buffalo; A Needle in the Knee Joint; Suppuration; X Ray; Operation; Cure, by Dr. William Madden, of Brooklyn; Acute Gastro-intestinal Rheumatism, by Dr. Glentworth R. Butler, of Brooklyn; Chlorine in the Treatment of Enteric Fever, by Dr. Reynold W. Wilcox, of New York; Polyomyelitis Anterior Acuta in Children over Five Years, with a Report

of Cases, by Dr. Charles Mason, of Peekskill; The Treatment of Exophthalmic Goiter by Galvanism, by Dr. H. De Valsen Pratt, of Elmira; Hysteria, by Dr. Landon Carter Gray, of New York; The Nervous System in the Pathogenesis of Albuminuria, by Dr. John H. Brownlow, of Ogdensburg; Arterio-sclerosis in its Bearing on Apoplexy, or Cerebral Hemorrhage and Thrombosis, by Dr. Edward D. Fisher, of New York; Tonsorial Hygiene, and the State Control of Barber-shop Sanitation, by Dr. A. Walter Suiter, of Herkimer; Hydrotherapy in Chronic Diseases, by Dr. Simon Baruch, of New York; Abscess of the Lung: The Clinical Data of Two successfully treated Cases, by Dr. Henry L. Elsner, of Syracuse; Pneumonia in Infants: Diagnosis and Treatment, by Dr. William P. Northrup, of New York; The Relation of Classical Literature to Medical Education, by Dr. Charles De La Montayne, of Port Ewen; Nervous Dyspepsia, by Dr. Grace Peckham Murray, of New York; Weak Heart, by Dr. Charles M. Rexford, of Watertown; Lithaemia, by Dr. Bradford C. Loveland, of Clifton Springs; Two Unique Cases of Vesico-vaginal Fistula, by Dr. John O. Polak, of Brooklyn; Operation for the Repair of the Recto-vaginal Septum, by Dr. Ralph Waldo, of New York; The Treatment of Uterine Hemorrhage with Stypticine, by Dr. Herman J. Boldt, of New York; The Relative Merits of the Different Operations for Uterine Suspension, by Dr. John B. Harvie, of Troy; The Advantages of the Suprapubic over Vaginal Coliotomy, by Dr. John W. Whitbeck, of Rochester; The Advantages of Vaginal over Suprapubic Coliotomy in Certain Diseases of the Uterus and Appendages, by Dr. Henry T. Williams, of Rochester; The Death-rate in Abdominal Surgery, by Dr. W. Gill Wylie, of New York; The Relations of Movable Kidney and Appendicitis to each Other, and the Practice of Modern Gynecology, by Dr. George M. Edebohl, of New York; An Experiment in Ovarian Transplantation, by Dr. James H. Glass, of Utica; Conservative Treatment in Diseases of the Ovary and Vermiform Appendix, by Dr. Robert T. Morris, of New York; The Management of Lateral Curvature of the Spine, by Dr. Reginald H. Sayre, of New York; Lateral Curvature and Pott's Disease of the Spine; the Improved Aluminum Corset for their Treatment, by Dr. A. M. Phelps, of New York; Should Tuberculous Sinuses be treated Surgically or not? by Dr. Virgil P. Gibney, of New York; The Treatment of Umbilical Hernia, by Dr. William B. De Garmo, of New York; The Diagnosis and Surgical Treatment of Gallstones, with a Report of Cases, by Dr. Edward W. Mulligan, of Rochester; Intra-ocular Tumors: their Frequency, Prognosis, and Treatment, with Specimens, by Dr. Herman Knapp, of New York; The Present Operation for Senile Cataract, by Dr. D. B. St. John Roosa, of New York; The Surgery of Mammary Cancer, by Dr. Daniel Lewis, of New York; Further Study into the Nature and Frequency of Cancer, by Dr. Roswell Park, of Buffalo; Some Problems associated with Typhoid Fever, by Dr. William Ogler, of Baltimore; The Disinfection of the Alimentary Canal, by Dr. Abraham Jacoby, of New York; A Suture Material Suitable for Abdominal Surgery, by Dr. Robert J. Wilding, of Malone; A New Lap-suture in Abdominal Surgery, by Dr. William E. Butler, of Brooklyn; The Treatment of Boils and Carbuncles, by Dr. William O. Stillman, of Albany; The Limitations of Surgical Work in Country Practice, by George M. McComb, of Frankfort; The Differentiation of the Chronic Forms of Rheumatism, by Dr. Louis F. Bishop, of New

York; Life Insurance from a Professional Standpoint, by Dr. Josiah Hasbrouck, of Port Ewen; An Additional Reason for requiring in Almshouses Measures for the Prevention of Purulent Ophthalmia in Infancy, by Dr. Lucien Howe, of Buffalo; and The Scientific Aspect of the Mind Cure, by Dr. S. A. Russell, of Poughkeepsie. Papers by the following gentlemen have been promised: Dr. Peter A. Callan, of New York; Dr. William S. Cheesman, of Auburn; Dr. Henry H. Deane, of Watertown; Dr. William S. Ely, of Rochester; Dr. John H. Jewett, of Canandaigua; Dr. Clair S. Parkhill, of Hornellsville; Dr. A. D. Rockwell, of New York; Dr. Frank Van Fleet, of New York; Dr. Charles G. Wagner, of Binghamton; and Dr. Hamilton D. Wey, of Elmira.

The Effects of the Spanish-American War.—The *Lancet* for December 31st, in its review of the *annus medicus*, says on this subject:

"Turning to other parts of the world, we have had the Spanish-American war with its striking and dramatic incidents and results, the full effects of which have yet to be realized and harvested. That these will be for the good of humanity and the world at large can not be doubted; and we have only to take account of the inimical feeling and even consternation with which the drawing together of the American and British nations is regarded by foreign powers to see that they, at any rate, realize the meaning and import of such a combination. We heartily congratulate the United States on the successful termination of that war, believing, as we do, that its results will be favorable to the freedom of the oppressed and eventually turn out to be for the benefit of all concerned. The year 1898 is the most eventful to the American Republic since the end of its civil war. For the first time the United States Government finds itself face to face with the problem of dealing with foreign possessions outside its own continent. Considering that a commission is inquiring into the causes and extent of the alleged breakdown of the sanitary and medical arrangements of the late war, for which the United States was apparently unprepared, there is no need to dwell further upon the subject now; but we may add a word to the effect that it is only by the organization and perfecting of all that appertains to a medical service in times of peace that successful results can be attained in time of war. There is no royal road to success in this respect, as this and other countries have had to learn by bitter experiences in the field."

A Miniature Baby.—According to the *Boston Medical and Surgical Journal* for January 12th, there is at present at Gouverneur Hospital a female infant said to be perfect in its development in every respect except as regards size; at the age of two months she weighs but thirty-two ounces and three quarters. When born, her weight was only sixteen ounces.

A Study of Cerebro-spinal Meningitis.—At a meeting of the New York Neurological Society held on Tuesday evening, January 3d, Dr. Lewis A. Conner read a paper based on sixty cases that had been observed in the Hudson Street and New York Hospitals. Every effort had been made to exclude those in which the meningitis was secondary to other processes. Of the sixty, twenty-one occurred in 1897, the year in which the disease was especially prevalent in various parts of the country. Ten occurred during the last two months. One half of all the cases occurred in the spring months, March, April, and May. The youngest patient was a

child of two months, and the oldest a woman of sixty-five years. In only one was there a distinct history of exposure to cold immediately preceding the attack. No two of the patients came from the same family, although two negroes occupying the same room were attacked within a few hours of each other, and both died in a short time. Post-mortem examinations were made in eighteen of the forty-one fatal cases. In the very acute cases there was marked congestion of the meningeal vessels. The exudate was often so slight as to be scarcely perceptible, except in cases that had lasted two weeks or more. The lateral ventricles were often distended with purulent fluid. The greatest involvement of the spinal cord was in the dorsal and lumbar portions, and always on the posterior surface. Microscopical examination showed constant involvement of the subjacent brain tissue. The common involvement of the cranial nerves was also noted. Councilman and his associates, said Dr. Conner, were convinced that the specific cause of epidemic cerebro-spinal meningitis was the *Diplococcus intracellularis*. In the thirty-five cases examined by them the organism was found in all but four, almost exclusively in the pus cells. It was an aerobic bacterium, which grew best on blood-serum agar. It had been previously considered that the *Diplococcus lanceolatus*, or the pneumococcus, was the organism responsible for this disease. Bacteriological examination was made in ten of the cases reported in the paper. In three autopsies in which the culture results were negative only ordinary culture media were used. The *Diplococcus intracellularis* was found in only four of the cases, and the pneumococcus in about the same proportion. All the usual types described were represented in this series. All the fulminant cases were marked by early delirium and coma. Twenty-six ran their course in two weeks, and all ended fatally. There were two of the intermittent type. Thirteen lasted more than a month, and in these cases eleven patients recovered. The longest course was three months and a half. The onset was sudden in thirty-nine cases. The temperature was decidedly irregular, but there were several distinct types. In a number the temperature was normal or subnormal throughout the disease, or up to a short time before death. In a second type the temperature was moderate most of the time. In others the temperature rose gradually and then fell, whether or not recovery took place. These cases resembled typhoid fever somewhat, but not infrequently the highest temperature was in the morning. In the fulminant cases the temperature was sometimes nearly normal for the first few hours. The pulse also varied greatly, independently of the variations in temperature. Retardation of the pulse was not common, and was pronounced in only two cases. Where the symptoms were active an almost constant symptom was a marked increase in the respiration rate. Vomiting was present at some time in over half; in twenty-five it appeared at the onset, and in fifteen only at that time. In fifteen it remained a prominent feature throughout the disease. In no case was the vomiting "projectile." There was more or less pain in all cases, and it was usually in the form of an intense occipital headache, but there was not infrequently pain in the back, limbs, and chest, sometimes especially marked on one side. The reflexes presented a constant feature. More or less rigidity of the muscle of the head, neck, and back was present in almost every case. Rigidity of all the extremities was also common. There was no uniformity about the appearance of the pupils. In one case which ended in re-

covery there was consciousness throughout. In a large proportion delirium and stupor alternated. Some of them were marked by an unusual form of delirium simulating hysteria. Skin manifestations were observed in twenty-five per cent., but the hæmorrhagic eruption was seen in only three of the cases. A distinct leucocytosis was present in most of the cases in which the blood was examined. The spleen was enlarged in twenty-three per cent. In none of the cases of recovery was there disturbance of vision subsequently. In two there was bilateral deafness, but one of the patients recovered completely. In several there were involvements of the joints resembling those seen in rheumatism. In seven pneumonia occurred, and in all of them it developed after the meningitis. Albuminuria was generally an accompaniment of the disease.

St. Vincent's Hospital.—A concert, followed by a dance and supper, was held at the Waldorf-Astoria Hotel on Wednesday evening. It was the first of a series of entertainments in celebration of the "golden jubilee" of the hospital, by which it is hoped to raise money to provide a recent addition to the hospital with proper furniture.

The Italian Pharmaceutical Association of the State of New York was incorporated last week.

The Ninth International Congress of Ophthalmology will be held in Utrecht on August 14th, 15th, 16th, 17th, and 18th. Only the English, French, and German languages can be employed in communications. The registration fee is twenty-five francs. Gentlemen who intend to be present are requested to write to Professor H. Snellen, of the University of Utrecht, stating if they are to be accompanied by ladies and if they intend to present papers.

The Late Dr. Charles W. McManus.—We have been requested to publish the following:

The medical board of the Willard Parker and Riverside Hospitals having learned with profound regret of the death, on January 5, 1899, of Dr. Charles W. McManus, late interne physician to the hospitals, the following preamble and resolutions were unanimously adopted:

Whereas, It has pleased the Almighty to remove by death Dr. Charles W. McManus, interne physician to these hospitals; and

Whereas, Dr. McManus has made for himself in our hospitals an enviable record for conscientious and painstaking work and unremitting zeal in the performance of his duties, and has gained the esteem and affection of his colleagues by his admirable personal qualities; therefore be it.

Resolved, That this board deeply regrets the cutting short of so promising a career at the very beginning of professional life; and be it

Resolved, That we offer to the father of Dr. McManus our deep sympathy in the terrible loss he has sustained in the death of this his only son; furthermore, be it

Resolved, That a copy of these resolutions be transmitted to the board of health, the father of the deceased, and the medical journals, and spread in full upon the minutes of this meeting.

[Signed.]

JOHN W. BRANNAN, M. D.,

President;

H. W. BERG, M. D.,

Secretary.

Original Communications.

BACTERIOLOGICAL STUDY
IN THE ÆTIOLOGY OF YELLOW FEVER.*

By P. E. ARCHINARD, M.D.,

NEW ORLEANS,

ASSISTED BY

R. S. WOODSON, M.D.,

CAPTAIN U. S. ARMY,

AND

JOHN ARCHINARD, M.D.

THE recent visitation of yellow fever in New Orleans during the summer and fall of 1897 afforded us a splendid opportunity of studying from a bacteriological standpoint the causation of this disease. The published researches of Sternberg and Sanarelli were of great advantage to us. We followed as closely as we found practicable the technique of these experimenters, and we were not long in making discoveries and reaching a definite conclusion.

The news of the outbreak first reached us in mid-ocean, when casually glancing over a copy of the *New York Herald* of September 7th, belonging to a fellow-passenger. From that time on we had no other idea but the reaching as speedily as possible of our native city, to be on the ground and help the good cause—the study of this dreadful malady—and contribute our mite toward stamping it out forever. We reached New Orleans on September 28th, and forthwith began our labor in the pathological department of the Isolation Hospital and in the Bacteriological Laboratory which the Tulane Medical College so generously puts at the service of the Louisiana State Board of Health to carry on its work.

And here it might be best to begin by mentioning those who have been of assistance to us in our important and difficult task. First, we owe thanks to Dr. J. D. Bloom, house surgeon of the Charity Hospital, for his kind permission to have free access at all times to the Isolation Hospital and its post-mortem house; to Dr. J. H. Vauzie, the visiting physician of the Yellow-Fever Hospital, for his kindness and, at times, valuable help; to Dr. Hamilton P. Jones, resident physician of the institution, for help in various ways, such as collecting blood stoles for us, assisting us at autopsies, in taking notes and making our cultures from the blood and organs, and occasionally, when we were absent from the autopsies, in making cultures and forwarding same to us; to Dr. O. L. Pothier, pathologist of the Charity Hospital, for his uniform courtesy and kindness in the

post-mortem house, making the autopsies at times to suit our convenience best, furnishing us with materials and specimens of organs, and allowing us to take cultures as we suggested and preferred; to Dr. R. S. Woodson, captain United States army, a daily attendant and worker in the laboratory, for his help in making plate cultures, performing comparative tests with various bacteria, under our guidance and at our suggestion, doing a great part of the work of the Widal's test, keeping our cultures alive, assisting us in the animal inoculations and at their autopsies, and in making cultures from them, and in the latter part of his stay with us, in making the animal autopsies for us; to Dr. Ott Lerch, for sundry services, too long to enumerate; to Dr. John Callan and other frequent visitors to the laboratory, for their kind encouragement; lastly, to Dr. John J. Archinard, a young brother and assistant, for the remarkable foresight with which he collected the blood of patients, made autopsies and cultures, and kept the organs of all his cases before our return, and after we had assumed charge, for his constant devotion and assistance, doing whatever we required of him always cheerfully and well, never caring how much humdrum or drudgery there might be in it all, provided it was our wish and for the benefit of science and mankind.

Our work may properly be divided into four parts, all of which are distinct, but which have enough relation together to be presented in the same treatise:

I. SEARCH FOR AND ISOLATION OF THE SPECIFIC GERM OF YELLOW FEVER IN THE CADAVERS OF YELLOW-FEVER PATIENTS, IN THE BLOOD OF THE SICK, AND IN THEIR EXCRETIONS.—For the purpose of avoiding repetition and to show clinically and pathologically the type of our most severe cases of yellow fever, we give below the history and post-mortem notes of one of these, closely observed from beginning to end:

N. B., taken sick September 30, 1897; slight chill; severe headache; anorexia and great pain in muscles of back and limbs; temperature, 103.6° F.; pulse, 110.

October 1st.—Temperature, 104° F.; pulse, 126; tongue very much coated; infected conjunctivæ; great nausea; urine high, colored; specific gravity, 1.020; scanty, thirteen ounces, and a half in twenty-four hours; acid reaction; no albumin; diarrhoea, with dark-colored stools; blood examined for phagocytes; negative result.

2d.—Conjunctivæ more injected; tender, fissured, particularly noticeable; nasal mucous membrane; great nausea; severe headache; urine, twenty-two ounces in twenty-four hours; specific gravity, 1.020; reaction acid; albumin positive, five per cent.; no casts; osmium, temperature, 104.1° F.; pulse, 98.

3d.—General symptoms more severe; temperature, ten per cent.; great anorexia and delirium; no phagocytes; urine, twenty-four ounces; specific gravity, 1.020; reaction acid; albumin positive, five per cent.; no casts; osmium, temperature, 104.4° F.; pulse, 88.

7th.—Great anorexia; severe headache; vomit, with a few, from 76 to 96, phagocytes; temperature, 103.8° F.; reaction of urine, alkaline; albumin, positive, five per cent.; no casts; vomit.

5th.—State of collapse; temperature, 102° F.; pulse,

* This article was intended for the meeting of the American Medical Association in Denver. Owing to the outbreak of the war the writer foresaw that it would be impossible for him to attend and meet, and he therefore read the article before the Louisiana State Medical Society, in New Orleans, on May 12, 1898.

SS; almost complete suppression of urine; albumin, sixty per cent.; beginning jaundice; black vomit very severe.

Ult.—Projectile vomiting; complete anuria; uræmic coma; convulsions; death 11 A. M.

Autopsy six hours after death; body well nourished; rigor mortis well marked; hypostatic congestion marked in dependent portion of body; integument saffron hue; conjunctivæ yellow; dry omentum; liver pale, boxwood color, very friable; gall bladder filled with bile; left kidney slightly congested with fatty infiltration; right kidney enlarged, much more congested, and less fatty; stomach, numerous extravasations upon mucosa, especially pyloric end, much congestion, serous coat of yellow color; heart and lungs showing steatosis; pericardial sac filled with fluid; spleen normal, bladder empty; cultures from all organs and our bacillus isolated therefrom.

Our studies comprise the cultures obtained from sixty autopsies: from the life blood in five cases; from the exhaled breath in twelve cases; from the sweat or scraping of the surface of the body in twelve cases; from the black vomit in four cases.

Of the sixty autopsies, eight were made and cultures obtained by Dr. John J. Archinard; one was made by Dr. Woodson and Dr. John Archinard at the Jackson Barracks. The other fifty-one were made at the Isolation Hospital. At nearly all of the latter we were present ourselves and made our own cultures. In the first cases, besides taking cultures immediately after section of the body, blood from the cadaver was drawn into sterilized pipettes and large pieces of organs, principally liver, spleen, kidneys, were wrapped up in anti-septic dressings, taken along and incubated for twenty-four or forty-eight hours, according to Sternberg's recommendation; after which, from their interior, cultures were made and animals inoculated. As this inoculated blood and organs did not seem to give us better results, we soon abandoned this procedure.

Our mode of taking cultures at autopsies was as follows: Immediately after section the organs were exposed one at a time, surface cauterized with a piece of flat iron heated to whiteness and a stab made with a sterile, lance-shaped platinum needle; the blood, organ juice, and small *débris* of tissue remaining adherent to the needle were planted on the surface of an agar tube or in lactose bouillon. After a short time bouillon inoculation was done away with on account of the difficulty of transporting same. The cultures brought to the laboratory were then incubated for twenty-four, sometimes forty-eight hours, and then allowed to grow outside of incubator; later on they were plated and the various colonies isolated.

Cultures were taken at each autopsy from the following part: Peritoneal exudate, pericardial fluid; blood from the heart; blood and juice of the lungs, liver, kidneys, spleen; bile from the gall bladder; excretions from the stomach, and occasionally from other parts.

With the exception of two cases, our cultures always gave us a number of bacteria, and often the plating had to be repeated several times before pure colonies could be obtained. The bacteria found consisted chiefly of our bacilli in association with the coli communis, frequently with the *Proteus vulgaris*, sometimes the *Staphylococcus aureus* and *citreus*, occasionally, though rarely, the *Streptococcus pyogenes*. Of the sixty autopsies held, six were rejected, as they did not show the anatomical lesions of yellow fever. In a few other cases little or no growth was obtained from the original culture tubes. In several instances some of the tubes in our laboratory got so mixed up that it was impossible for us to positively identify them, and all these were rejected. On account of these discarded ones the number of autopsies from which cultures were available for our purposes was reduced to thirty-nine. In these thirty-nine cases, we were able to obtain our bacilli thirty-two times; in two cases in a pure condition. In the thirty other cases in association, as stated above. In seven cases we were unable to isolate any bacilli resembling ours.

Five specimens of live blood were obtained from veins at the bend of the elbow, with aseptic precaution from typical cases of yellow fever, on the third, fourth, and sixth days of the disease; six cubic centimetres were taken from each case and mixed up in an Erlenmeyer's flask with five cubic centimetres of sterile lactose bouillon, the whole incubated for forty-eight hours and then plates made therefrom, and a portion used for the inoculation of animals. In two of these cases the growth showed pure cultures of our bacilli; in two other cases, we were able to obtain pure cultures after passing same through animals; in one case the result was negative.

What we call the exhaled breath was obtained by fixing some sterilized cotton in an inhaler and binding same over patient's mouth and nose for from fifteen minutes to an hour; the cotton was afterward planted in lactose bouillon, incubated forty-eight hours, and then plated. In all these cases the patients showed typical symptoms of yellow fever from the fourth to the twelfth day of disease. We were able in twelve such cases to obtain our bacilli only twice.

The sweat and scraping from the body of patients were also investigated. For this purpose a piece of sterilized cotton was rubbed over the face, neck, and upper part of thorax; bathed in perspiration of patients in advanced stages of the disease, and planted in bouillon as above. Of the twelve cases so studied, two gave us the bacilli.

We have used the word bacilli always in speaking of the micro-organism we isolated, because for a while we thought they were two distinct micro-organisms, though morphologically they appeared identical; but some slight variation in their culture development made us feel that it was best to keep them separate. Later experimentations and the passage through animals showed

that we were dealing with one and the same bacillus, for both answered identically to all the culture tests known. Our two organisms we called for convenience sake bacillus A and bacillus B. Bacillus A was obtained from colonies which appeared nucleated on gelatin plates, whereas bacillus B was obtained from colonies almost identical but not nucleated. Later on we observed, however, that bacillus A, when in the pure state, would as often give rise to non-nucleated colonies as to nucleated ones, and the reverse appeared also for bacillus B. The fact of the matter is, we believe, that at first our cultures of bacillus B were somewhat contaminated with some saprophytic bacteria, and that accounted for the cultural variation which it showed when compared with bacillus A.

In our experiments we obtained bacillus A twenty-nine times; and in four cases we obtained from the same plates both bacilli A and B. The fact noted above, of nucleated and non-nucleated colonies, we have noticed frequently since, when cultivating the *Bacillus icteroides* of Sanarelli on gelatin plates.

The character of our bacillus may be described as follows: A short thick rod measuring from two to four micromillimetres in length by about half the breadth, showing in different media marked pleomorphism: it is very motile, as much so as the *Bacillus typhosus*. It has end flagella very much like this bacillus, stains well in all watery solutions of basic aniline dyes, unstains by Gram's method. It is aerobic—i.e., it grows best in ordinary atmosphere—but is facultative anaerobic; i.e., grows when deprived of oxygen and in the presence of hydrogen. It grows readily in all known neutral or weakly alkaline media, both solid and fluid; it produces very slowly, or not at all, acidity in these media: it grows best at 37° C., but grows also, though more slowly, at ordinary laboratory temperature from 18° to 22° C. In peptone bouillon it grows fairly well, but best in lactose bouillon, causing a general turbidity of the fluid, but no scum and no deposit at the bottom. It causes a slight fermentation in lactose bouillon generally, but occasionally produces no fermentation in this media; in glucose bouillon it produces marked fermentation; in milk it grows readily without producing coagulation even after weeks; in litmus milk it causes a slight acidity, but only very slowly; in Dunham's solution it produces no indol, even after the addition of nitrite, but does so after the addition of an acid; on potatoes it produces a whitish yellow transparent growth; on blood serum it grows readily, but shows nothing characteristic; on the surface of gelatin it grows readily, showing a whitish transparent growth; on gelatin plates the individual colonies show under the low power of microscope as a gray or yellowish gray rounded form, iridescent and often containing a nucleus which may be central, but is at times peripheral; this nucleus is generally darker than the rest of the colony and is surrounded by a light halo; in stick culture it grows

all along the stab, but more luxuriantly at the surface. It does not liquefy gelatin. On the surface of agar its growth is almost transparent when young. As it grows older it gets whiter. Older colonies at the bottom of the tubes, near the water of condensation, show marked raised points, darker than the rest of the growth, which resemble nuclei. The characteristic growth described by Sanarelli in old cultures of his *Bacillus icteroides* in agar, when growing partly in and partly out of the incubator, has been observed by us, but we have been able to obtain this characteristic growth only when these cultures were quite old. It is typically agglutinated by the blood of yellow-fever patients or of persons who have recently had yellow fever, as will be mentioned later. Inoculated in animals, guinea-pigs and rabbits, it gives rise to typical symptoms, and when inoculated in sufficient quantity causes death, and sometimes very quickly. The pathological lesions found are characteristic, and it is found in the blood and organs of animals dying from its effect, and can be recovered from these in pure cultures.

II. RESULTS OF ANIMAL INOCULATIONS.—We give results of injections in guinea-pigs and rabbits, together with post-mortems of these animals. The rabbits were inoculated in the veins of the ears and the guinea-pigs subcutaneously. The material used for inoculation was always a bouillon culture of the bacilli from eighteen to twenty-four hours old, and kept at 37° C.

Rabbit No. 18, weight 1529 grammes, inoculated with six cubic centimetres bouillon culture of our bacillus (A), died during night of same day; weight after death, 1470 grammes. Autopsy showed blood-vessels of heart and diaphragm congested; heart full of blood; lungs pale; intestines very much congested; stomach full of food; mucous membrane congested and showing ecchymotic spots; liver fatty and friable; spleen enlarged; gall bladder containing a large quantity of dark bile; kidneys pale and fatty; bladder filled with non-albuminous urine. Cultures made from blood, heart, liver, spleen, showed typical growth of bacillus A.

Pig No. 18, weight 475 grammes, inoculated subcutaneously with twelve cubic centimetres of a lactose bouillon culture of our bacillus A, eighteen hours old, at 37° C., showed shortly afterward signs of depression, temperature rose the next day to 41° C., animal remained quiet and was unwilling to move or eat; he died three days after. Autopsy, immediately after death, showed the blood-vessels of pleura, peritoneum, diaphragm and heart surface very much congested; heart full of dark blood; lungs pale, otherwise normal; liver congested, fatty and friable; kidneys congested and fatty; bladder contained some albuminous urine; stomach and small intestines very much congested with ecchymotic spots in mucous membrane; viscera full of black fluid resembling black vomit. Bacillus A obtained from cultures made of each organ.

Rabbit No. 19, weight 1,990 grammes, injected intravenously with six cubic centimetres of an eighteen-hour-old bouillon culture, our bacillus B; died during the night; post-mortem lesions same as those of rabbit No. 18. Animal was gravid. Cultures as made from all organs and also from fœtus gave us pure cultures of bacillus A.

Pig No. 19, weight 390 grammes, inoculated the same day as pig No. 18, but with bacillus B instead of A; died on the same day as pig No. 18 and showed identical post-mortem lesions, and from all its organs we were able to obtain pure cultures of bacillus B.

Rabbit No. 17, weight 1,950 grammes, inoculated at same time as rabbits Nos. 18 and 19, but with *Bacillus icteroides* of Sanarelli; died the same day as rabbits Nos. 18 and 19 and showed the same lesions; its organs gave pure cultures of the bacillus Sanarelli.

Pig No 17, weight 450 grammes, inoculated with twelve cubic centimetres *Bacillus icteroides* (Sanarelli) on same day as pigs Nos. 18 and 19; died within a few minutes of the latter animals on the fourth day after inoculation, presenting identical post-mortem changes and giving pure cultures from its organs of *Bacillus icteroides*.

Pig No. 20 inoculated with five cubic centimetres of a bouillon culture of bacillus A; became sick, lost appetite, had fever up to 42° C., lost weight, but after three or four days became more lively and began eating again.

Rabbit No. 20 inoculated intravenously with two cubic centimetres bacillus A; lost weight and appetite, was feverish for a few days, afterward recovered appetite and became lively again, and only died thirty-one days after inoculation, showing tuberculosis of lungs and liver. Cultures made from organs and blood remained sterile.

Rabbit No. 21 inoculated intravenously with two cubic centimetres of a bouillon culture of Sanarelli's bacillus; became sick like above, but after a few days recovered and kept alive.

Pig No. 21, inoculated with five cubic centimetres of a bouillon culture of *Bacillus icteroides* (Sanarelli); remained alive after showing for a few days indications of weakness.

III. COMPARATIVE TESTS BETWEEN BACILLUS SANARELLI AND OUR BACILLI A AND B.—The following is a comparative table of our bacilli A, B, and *Bacillus icteroides* of Sanarelli from tests made by us:

<i>Bacillus icteroides</i> (Sanarelli).	Bacillus A.	Bacillus B.
1. Aerobic and facultative anaerobic.	Aerobic and facultative anaerobic.	Aerobic and facultative anaerobic.
2. Short rod: 2 to 4.	Short rod: 3 to 4.	Short rods 2 to 4.
3. Actively motile.	Actively motile.	Actively motile.
4. Stains readily with aniline dyes; does not resist Gram's method.	Stains readily with aniline dyes; does not resist Gram's method.	Stains readily with aniline dyes; does not resist Gram's method.

<i>Bacillus icteroides</i> (Sanarelli).	Bacillus A.	Bacillus B.
5. Does not produce acid in Dunham's solution, even after addition of nitrite; slowly sometimes after addition of acids.	Does not produce acid in Dunham's solution even after addition of nitrite; slowly sometimes after addition of acids.	Does not produce acid in Dunham's solution even after addition of nitrite; slowly sometimes after addition of acids.
6. Slight odor of indol.	Slight odor of indol.	Slight odor of indol.
7. Does not coagulate milk.	Does not coagulate milk.	Does not coagulate milk.
8. Produces acid, but very slowly.	Produces acid, but very slowly.	Produces acid, but very slowly.
9. Ferments glucose rapidly.	Ferments glucose rapidly.	Ferments glucose rapidly.
10. Ferments lactose slightly, sometimes not at all.	Ferments lactose slightly, sometimes not at all.	Ferments lactose more readily.
11. Grows in gelatin, does not liquefy this medium.	Grows in gelatin, does not liquefy this medium.	Grows in gelatin, does not liquefy this medium.
12. Growth on potatoes almost transparent.	Growth on potatoes almost transparent.	Growth on potatoes almost transparent.
13. Produces cloudiness without deposit or scum in bouillon.	Produces cloudiness without deposit or scum in bouillon.	Produces cloudiness without deposit or scum in bouillon.
14. Growth on gelatin whitish transparent; under the microscope (low power) grayish or yellowish-gray, iridescent, and often containing nucleus.	Growth on gelatin whitish transparent; under low power grayish or yellowish-gray, and often contains nucleus.	Growth on gelatin whitish transparent; under low power grayish and sometimes nucleated, at others not.
15. Growth in agar almost transparent when young, porcelain-like when older; at bottom of tubes especially, colonies show marked nucleation when older.	Growth in agar almost transparent when young, porcelain-like when older; at bottom of tubes especially, colonies show marked nucleation when older.	Growth in agar almost transparent when young, porcelain-like when older; at bottom of tubes especially, colonies show marked nucleation when older.
16. Agglutinated by yellow-fever blood.	Agglutinated by yellow-fever blood.	Agglutinated by yellow-fever blood.

Characteristic growth in and out of incubator, as described by Sanarelli, has never shown, except in very old cultures of our bacilli A and B, and the same may be said of the *Bacillus icteroides* grown by us.

Comparative tests to show growth in agar cultures of other bacilli afterward made sterile and culture medium allowed to cool, and then inoculated with our bacilli, and *Bacillus icteroides* of Sanarelli gave us negative results with all. In one or two instances we have noticed that some form of laboratory mold favor the growth of bacillus A, bacillus B, and bacillus Sanarelli.

IV. SERUM REACTION WITH BACILLUS ICTEROIDES AND OUR BACILLI A AND B.—Pfeiffer's demonstration of the phenomena of agglutination of microbes which consist in the peculiar clumping and stoppage of motion in cultures of before motile bacilli by the addition to those cultures of a small amount of the blood serum of animals previously inoculated with these bacilli, served as a new departure in bacteriology, and enabled us to apply this method for the purpose of aiding in the diagnosis of previously obscure cases.

Widal discovered that the serum of patients afflicted with typhoid fever could agglutinate the *Bacillus ty-*

phosis; he laid down definite and reliable rules for the application of this method to the diagnosis of the disease. Later Wyatt Johnston, of Montreal, showed that a drop of dry blood, afterward properly dissolved and diluted, could be used as efficiently as fresh serum, and we are thus enabled to apply the rules of serum diagnosis to typhoid fever in municipal and board of health laboratories.

Following in those footsteps we analyzed blood from yellow-fever patients, from healthy individuals, and from cases in various other diseases, for the purpose of applying the Widal test to the *Bacillus icteroides* recently isolated by Sanarelli in yellow-fever cases and to an identical bacillus found by us in a number of 1897 fever cases. The work done in a hundred cases on this subject, in collaboration with Captain R. S. Woodson, M. D., United States army, then stationed in New Orleans, and with our assistant, Dr. John J. Archinard, we submitted to the Orleans Parish Medical Society at its meeting, January 22d, and our paper read then has been published in the February number of the *New Orleans Medical and Surgical Journal*. Since then we have continued and extended our labor, in conjunction with Dr. John J. Archinard, Dr. Woodson having removed to Johns Hopkins Laboratory, and we have added a number of cases to those already observed, which make the results obtained still more interesting and important. A synopsis of all this is here submitted and conclusions drawn therefrom.

We used the blood of fifty cases of yellow fever in the acute stages and during recent convalescence. Twenty of these are of little value to us and should be discarded, as both the bacillus of yellow fever and that of typhoid fever were agglutinated, owing to the fact that the blood was used in too concentrated a form in making the test (one in five, when it should have been one in twenty, or even one in forty). In the remaining thirty cases, when the proper dilution of blood was made (one in forty), we obtained the characteristic clumping of the yellow-fever bacillus in twenty-four cases, a proportion of eighty per cent. If now from these thirty cases we omit three cases where no clumping with the bacillus of the yellow fever was obtained, and a characteristic clumping with the bacillus of the typhoid fever, cases which were thought to be cases of secondary fever following yellow fever, but which were probably simple cases of typhoid fever, our proportion of positive cases would be $88 \pm$ per cent. In the yellow-fever cases, omitting the three just referred to, the clumping both of typhoid and of yellow fever bacilli occurred five times, but four of those cases were cases of yellow fever with a previous history of typhoid, or typhoid case with a recent history of yellow fever. In only one case did we get such a double reaction without the previous history of typhoid, and in that case it was not possible to ascertain the previous history. In five or six of those cases, where the blood was taken early in

the disease (second day), the agglutination was well marked. This seems to point to the fact that the test would be more useful in the early stages of the disease, indeed where it is most needed. Our number of cases has been too few to accept this question as settled. Experiments on a large scale are necessary before concluding finally.

Twenty cases of malarial fever were examined. Plasmodium was found in thirteen cases and not sought for in one case with a distinctive history of malarial fever. In two other cases plasmodium could not be found, though the clinical history was undoubtedly malarial intermittent. Seventeen cases in all, which gave negative results with the *Bacillus icteroides*. In three cases agglutination was obtained: these cases showed no plasmodium, and were all cases of continued malarial fever of five, six, and ten days' duration, occurring in the midst of the epidemic, one of them being an Italian.

Thirty-three cases of typhoid fever were examined; twenty-five cases gave negative results with the *Bacillus icteroides*, and positive results with the *Bacillus typhosus*. In six cases the reaction with both bacilli were obtained; but four of these cases gave histories of recent yellow fever or of yellow fever in 1878. In the other two cases no history of yellow fever could be obtained. In only one case was it positive with the yellow-fever bacillus and negative with the typhoid.

The blood of thirty cases of various diseases were submitted to the test—such as scarlet fever, tuberculosis, acute diarrhoea, alcoholism, chronic dysentery, measles, tertiary syphilis, diphtheria, cancer of the stomach, leprosy, acute jaundice by obstruction, chronic jaundice, nephritis, pneumonia convalescent, cirrhosis of the liver. All gave negative results.

Twenty cases of normal blood coming from individuals who had never had yellow fever, some of them foreigners, gave negative results with the test. This rather limited number, however, was deemed sufficient on account of the uniformity of the results.

To test how long the blood in yellow-fever cases retained its agglutinative power, we tried the blood in ten cases of fever of 1897 who had been well for several weeks, and obtained agglutination in all but one. Also the blood of ten cases of persons who had had well-marked attacks of yellow fever in 1878, and we obtained agglutination with the yellow-fever bacillus in all but one. A number of cases who had had yellow fever in epidemics previous to 1878 (1853, 1867, and 1869) gave us negative results.

Two cases who during the summer had had dengue in San Antonio kindly consented to let us use their blood for our test. In both of them the tests were negative. Ten cases of dengue with eruption, from Galveston, gave us negative results, and will later on apply the test to these.

We can summarize our results as follows:

By the dried blood method eighty per cent. of the

cases of yellow fever of 1897 agglutinated the *Bacillus icteroides*; nearly twenty per cent. of the cases showed negative. In our typhoid cases with no history of yellow fever the test is almost uniformly negative. In malarial fever whenever plasmodium could be obtained from the blood proving the positive diagnosis of malaria the results of the test were negative. In a number of cases of other diseases the tests were almost always negative. Over ninety cases of normal blood, or blood taken from diseases other than yellow fever, in persons who had never suffered with yellow fever, gave us only four positive results, and indeed in these four cases there is a remote possibility of previous yellow fever.

We would like to emphasize again the fact that our experiments, though pointing to a safe and reliable method of making a diagnosis of yellow fever, do not absolutely settle the question. Experiments should be carried on in a much larger number of cases and by different observers before accepting as final the serum diagnosis of yellow fever.

Conclusions.—1. In a large proportion of autopsies (thirty-two times in thirty-nine) of yellow-fever cases of 1897, in New Orleans, a bacillus was found either in a pure state (two times) or in association (thirty times), similar to the Sanarelli *Bacillus icteroides*. This bacillus has some points in common with the coli communis, but differs from it in some of its essential characteristics.

2. In live blood taken from the veins of the elbow, in well-marked cases of yellow fever, we were able to isolate our bacillus four times in five cases.

3. In the exhaled breath mixed up with secretions from the mouth and nose (sometimes bloody) we isolated our bacillus twice in twelve cases.

4. In the scrapings of the surface of the body of the sick, principally face, neck, in upper part of thorax, we isolated our bacillus two times in every twelve cases.

5. Our bacillus injected intravenously to the rabbit, and subcutaneously to the guinea-pig, in large doses, from five to ten cubic centimetres of a bacillus culture, is always fatal, and sometimes very quickly. In smaller doses (one to two cubic centimetres) the animals are made sick, but generally recover. The animals that die show characteristic lesions of the liver, kidney, and stomach. Cultures from these organs give pure growths of the inoculated bacillus.

6. Our bacillus is identical in almost every respect with Sanarelli's *Bacillus icteroides* obtained from himself, and from Dr. Sternberg, but differs somewhat in its cultural aspects from Sanarelli's description of his bacillus.

7. The blood of yellow-fever cases or of recent convalescents from this disease agglutinates the *Bacillus icteroides* of Sanarelli, and also our bacillus in over eighty per cent. of the cases in the proportion of one part of serum for forty of culture within one hour.

In less than twenty per cent. the reaction does not take place.

8. The blood of typhoid and dengue with eruption and malaria fever when properly diluted, 1 in 40, does not agglutinate the *Bacillus icteroides* or our bacillus except in exceptional instances.

9. The blood from a number of diseases other than yellow fever when properly diluted, 1 in 40, does not react on the *Bacillus icteroides* or our bacillus.

10. Normal blood properly diluted, 1 in 40, does not agglutinate the *Bacillus icteroides* or our bacillus.

11. The blood of persons who have had yellow fever seems to retain its agglutinative power for a number of years. The great majority of the cases tested by us who had had yellow fever in 1878 gave the reaction. Those who had had yellow fever previous to 1878 gave us a blood which possessed no agglutinative power with *Bacillus icteroides* or with our bacillus.

PRELIMINARY REPORT ON THE RESULTS OF BLOOD EXAMINATIONS AT CAMP WIKOFF, AUGUST AND SEPTEMBER, 1898.

By JAMES EWING, M. D.

DURING the five weeks, August 21 to September 24, 1898, the writer was detailed by Surgeon-General Sternberg to render what assistance blood examinations might give in the diagnosis of tropical and other fevers among the troops from Santiago arriving at Camp Wikoff. A preliminary report of the results of this work has been prepared as follows:

I. STATISTICAL.—The report covers 782 examinations made at Camp Wikoff, seven cases kindly furnished by Dr. Charles Norris, from Swinburne Island, New York city, and eleven cases from miscellaneous sources in New York city. These 800 examinations are all, for the writer's convenience in the subsequent treatment of the material, here considered together.

Of these cases, 605 proved to be of malarial nature. To these may be added 10 cases of typhoid fever developing in malarious subjects, and in which the presence in the blood of pigmented leucocytes and severe anæmia were evidences of recent malarial infection, which was also distinctly indicated by the clinical history.

In the 605 cases of malaria, the plasmodia were found in the blood in 335 cases, while in 270 cases the diagnosis was based upon the clinical history and the discovery in the blood of evidences of malarial infection. These evidences of malarial infection in the blood consisted (1) usually in the presence of intracellular bodies so much affected by quinine that their exact type could not be positively determined; or (2) in the presence of typical pigmented leucocytes; or (3), in chronic cases of distinct clinical character, in the presence of marked anæmia.

In 335 cases in which organisms were seen, the signet-ring form only of the *estivo-autumnal* parasite was found in 88 cases; crescentic bodies only in 131 cases; and both rings and crescents in 27 cases. The *estivo-autumnal* parasite was associated with the tertian parasite in 12 cases. The cases in which the *estivo-autumnal* parasite was found number in all 261.

The tertian parasite alone was found in 74 cases, associated with the *estivo-autumnal* parasite in 12 cases, or in all in 86 cases.

Four cases, which were probably of the quartan type, were encountered, but no rosettes were seen in the blood, and the diagnosis was not certain. They were classed as cases showing no organisms.

The blood was examined in 159 cases of typhoid fever, in 40 of which there were evidences of recent malaria, as above explained.

Table of Cases.

TYPHOID FEVER.		MALARIA.					
159		ESTIVO-AUTUMNAL.					
In recently malarious subjects with evidence of malaria in the blood.	40	Rings.	Crescents.	Both.	Tertian.	Double infection.	No distinct organisms.
		88	131	27	74	12	270
		261			74	12	
					335		270
					605		
				645			
				764			
Total classified,							

From the above summary, it appears that about eighty per cent. of the cases of Cuban malarial fever are of the *estivo-autumnal* variety, twenty per cent. of the tertian type, and of these about four per cent. show double infection with both parasites, while quartan fever would seem to be very rare.

II. ETIOLOGY.—It is probable that ninety-five per cent. of the patients in the Montauk General Hospital suffered in some form from malaria. A very large proportion of those who slept on the ground in the trenches and swamps about Santiago suffered from some form of fever. It appeared distinctly from the stories of patients that the greater the exposure in this respect, the more certain and virulent the infection. It was reported that every one of a group of men who slept on the ground at a certain particularly noxious spot died in Cuba of pernicious malaria.

Several patients who were early located on the higher ground claimed to have suffered only from "mountain fever," but their blood at Montauk contained crescents.

The earliest dates of beginning illness, as noted in the Montauk cases, were July 10th to 12th (in one case, July 5th), so that a week or ten days seemed necessary

for the development of the disease in any large number of men.

Many of the most intelligent patients were closely questioned about the prevalence of mosquitoes, but the evidence obtained was unsatisfactory, as some admitted that the mosquito was to them a constant pest, while others claimed never to have noticed its presence. Every one, however, noticed and complained about the putrid exhalation of the soil, and seemed to regard this as the dangerous element.

It was a very evident fact that the negro troops not only contracted the disease in fewer numbers, but also withstood the infection much better than the white men. The writer did not see a single fatal case of uncomplicated malaria in a negro, and, as a rule, the fresh and untreated cases showed a very moderate number of organisms in the blood.

III. SYMPTOMATOLOGY.—Most cases described their illness as beginning with a chill of moderate severity, often preceded for a few hours by headache or general pains. Severe chills were nearly always referable to the tertian parasite.

The initial chill of relapses was sometimes described as more severe or as less severe than the first chill, or as wanting altogether. Many relapses in *estivo-autumnal* fever at Montauk occurred without chills, but short chills were rarely absent in the tertian cases. In a moderate number of cases, instead of a chill, the patient was seized with violent vomiting, sometimes of blood.

In some fatal cases, *estivo-autumnal*, the discharge of a new brood of parasites was marked by no symptoms, except a slowly rising temperature and general collapse. Some cases died during the discharge of a new brood with a falling temperature.

With tertian cases the temperature usually reached its highest point in six to twelve hours; in the *estivo-autumnal* cases usually not before the middle or end of the second day.

In the tertian cases no specially peculiar symptoms were noted during the rise of temperature. In the *estivo-autumnal* cases the rise of temperature was often marked by a slowly progressing nervous disturbance, often reaching coma. This coma differed in onset and character from the sudden coma occurring in many other cases.

The sweating and fall of temperature were profuse and rapid in the tertian cases; but in the others the sweat was often slight, or occurred only after the administration of quinine in large doses, and the temperature often required several days for full defervescence. On the other hand, some severe paroxysms of *estivo-autumnal* infection were promptly aborted by large doses of quinine, and the temperature became normal and the blood free from parasites in twenty-four to thirty-six hours. Such cases were indistinguishable clinically from tertian infection with moderate initial chill.

The histories in many severe cases indicated that

the first attack lasted about a week, the temperature reaching its highest point on the second or third day, thereafter rapidly declining till the seventh or eighth day. Often a second paroxysm, of greater severity, followed almost immediately, and continued for a similar period. At Montauk there were rather numerous examples of these typical weekly recurring attacks. In the blood such cases usually showed the signet-ring forms for the first two or three days, young crescents on the third or fourth day, and adult crescents from the fifth to seventh days. A period covering the second to fourth days, with or without fever, was sometimes seen, during which no organisms could be found in the blood. These cases were actively treated with quinine.

It was a common impression that severe or untreated Cuban malaria is fatal in the third of these recurring attacks. Several fatal cases in the third attack were seen at Montauk.

The administration of quinine shortened many of the longer attacks to four or five days, and, treatment being continued, relapses were absent or mild, or exhibited an irregular remittent or intermittent fever.

The course of the fever in these fresh or old æstivo-autumnal infections exhibited the types of tertian, quotidian, remittent, and irregular fevers. Most of the cases of remittent fever of the present series were the result of disturbed paroxysms of the æstivo-autumnal infection.

A striking characteristic of the æstivo-autumnal fever, observed also in some cases of grave tertian infection, was the completeness of the patients' improvement, as judged by their subjective symptoms, during the intervals between attacks. In several fatal cases (130, 285, 295, 793) it appeared that the patient had avoided taking quinine after the subsidence of the fever, in Cuba or on the transport or at Montauk, to be seized shortly by a paroxysm of greater severity than usual, and which was fatal. The failure in these cases to continue treatment with considerable doses of quinine for some weeks after the apparent cure was undoubtedly responsible for many unnecessary fatalities, and the essential importance of this precaution can not be too positively urged.

In none of these fatal cases was the blood examined during the quiescent interval, but in many cases in which crescents were found during afebrile periods the patient suffered later very severe paroxysms, and it can not be doubted that similar signs persisted in the blood of the others. It follows, therefore, that as long as crescents persist in the blood, active treatment should be continued, and indeed for some time thereafter.

The cerebral type of the disease was the most frequent form of the severe seizures.

In fifty-four cases the blood was examined during or shortly after a period of coma. In the blood of these cases, crescent alone were found in thirty-three instances, ring alone in eleven, both rings and crescents

in two, tertian parasites in five, both æstivo-autumnal and tertian parasites in two, and no parasites fully identified in eleven.

Most of the cases in which no organisms are reported were belated cases of mild and transient coma in patients who had been receiving large doses of quinine. The negative finding in other instances of this group, however, indicates beyond a doubt that *the parasites are occasionally very scarce and very difficult to find in the blood during periods of deep coma*. In many of the cases in which crescents were finally found the search was successful only after one and two hours.

Of the eleven cases of coma in which rings alone were found, ten died, and the surviving case was only saved by the most heroic treatment. On the other hand, among thirty-three cases showing crescents only, there were but three fatalities. This comparison indicates a striking difference in the prognosis in cases of coma. The appearance of the early forms of the parasite in large numbers indicates a recent sporulation, and when coma results from the development of a new brood of parasites, it appears to be a very unfavorable condition. When coma supervenes at other periods of the cycle, it appears from the above data that the prognosis is very much more favorable.

According to the clinical character of the coma, these cases appeared to fall into two distinct classes:

1. The discharge of a new brood of parasites was often accompanied by a rise of temperature, gradual loss of consciousness, and slowly deepening coma. After a period of one to three hours the patients were usually in complete stupor and could not be roused. As already stated, most of them died, quinine proving ineffectual. The blood in these cases nearly always showed a large number of young rings.

2. Of the larger group of cases, many were brought to the hospital in coma, having been suddenly prostrated, with loss of consciousness, and with or without spasms or convulsions. Several such attacks developed suddenly in partly cinchonized patients in the wards. At the height of the coma the patient usually presented the typical appearance of "coma vigil," with nearly complete stupor, open eyes, pale sweating skin, stertorous breathing, a full pulse, fever, and pupils reacting to light. The blood in these cases contained crescents, sometimes tertian parasites, but few or no rings. Such conditions were nearly always relieved by large subcutaneous injections of quinine, or, if failing to respond, the stupor became complete, the reflexes were abolished, and the patient died. The result in cases of coma was seldom in doubt longer than twenty-four hours.

Some of these attacks of coma were mild and of short duration. In one case (335) the patient, while sitting up in bed smoking, three times in five days suddenly became unconscious, his pipe fell to the floor, and he remained stuporous for three or four hours. At the end of that period he would wake up, at once pick up his

pipe, and resume smoking. Crescents only were found in the blood during these seizures. An embolic process seems to be the only probable origin of such phenomena.

A considerable number of cases presented symptoms typical of meningitis, with marked rigidity of neck and limbs, and retarded pulse. The patients usually recovered promptly after the injection of quinine.

A great variety of milder nervous symptoms was observed, including localized neuralgias, spasms, aphasia, and mild hemiplegia; but these cases never failed to give a distinct history of a recent acute febrile attack.

Of the *algid type* no clear examples were seen, although many of the fatal cases died with low, but not subnormal, temperatures.

The *gastric type* of the disease was illustrated by many cases of violent and persistent vomiting, which occurred with or without fever. The response of many of these to subcutaneous injections of quinine was remarkable. In a few instances the initial paroxysm was marked by, or consisted in, considerable hæmatemesis. *In these cases, for some hours after the hæmorrhage, the parasites were usually scarce and difficult to find in the blood.*

In a few cases, showing crescents, the attacks of vomiting recurred every four days.

Intestinal symptoms were very common in the malarial cases at Montauk.

Simple diarrhœa was or had been a nearly universal complaint, and was usually referable to improper food.

Severe diarrhœa with mucous stools was a specially prominent complaint in sixty-seven patients who appeared to be suffering from *catarrhal colitis*.

Dysentery, or *ulcerative colitis*, was observed in thirty-six cases of malaria. It was probably much more frequent in occurrence than is indicated by these figures, for in the absence of prominent symptoms a previous colitis might have been overlooked in the history.

In the above cases of dysentery, crescents were found in the blood in nine cases, rings in six, tertian parasites in three, and both varieties of parasites in one case.

In seventeen cases the malarial element had been rendered quiescent by quinine, and no distinct parasites were found.

In nine of the active malarial cases the *Amœba dysenterica* was found in the stools. These amœbæ measured from forty to fifty-five micromillimetres in length while active, and fifteen to twenty-five micromillimetres in diameter when contracted to the spheroidal form after death. They were sometimes present in enormous abundance, especially in active untreated cases discharging much bloody mucus. In the more purulent stools they were less abundant, and in the entire absence of mucus the amœbæ could not be found at all. They were once identified in the aspirated fluid from a complai-

ing perirenal abscess, but no hepatic abscesses were seen in the cases at Montauk. The amœbæ were usually associated with streptococci, and in several cases enormous numbers of infusoria, *Megastoma entericum*, were found.

There was no clinical or gross anatomical evidence that these inflammations of the colon were referable to the malaria.

In very few cases of dysentery was an active malarial element suspected before the examination of the blood, as the malarial symptoms were masked by, or mistaken for, the symptoms of colitis. Seven cases were fatal, in all of which the malarial infection was severe. Most of the other cases recovered or were transferred to other hospitals.

In forty cases of continued fever, with marked evidence of recent malaria, diarrhœa was referred to infection with typhoid fever.

Pulmonary symptoms were rather infrequent. A few cases of bronchitis were seen, and two cases of pneumonia—one fatal—developed during the course of chronic malaria, and one case of pneumonia developed in the course of a tertian infection.

Nephritis of severe or moderately severe grade was observed in five cases, but no systematic examinations of the urine could be attempted, so that in the absence of distinct external signs, such as œdema, this lesion might often have been overlooked.

Jaundice was noted in pronounced form in ten cases, most of which were fatal, while a slight jaundice or yellowish discoloration of the skin from this or other causes was seen in the majority of cases of severe malaria.

Anæmia was noted in all the cases examined, and proved to be the most constant of all the symptoms. In the great majority of the active infections, the changes in the blood were those of secondary chlorotic anæmia, but usually without leucocytosis. Usually, even in severe cases, this anæmia was of moderate grade. And it was often a matter of surprise that blood showing so few morphological changes should harbor enormous numbers of parasites. This apparent anomaly was specially evident in negroes. There was always, however, a distinct loss of Hb in the red cells, although the diminution in the number of cells was not always plainly evident in stained specimens. The anæmic character of the malarial blood was almost always apparent as the drop was expressed from the finger and spread on the slide, and in this respect the difference between the malarial and the typhoid specimens was very striking and constant. The condition of the blood was, of course, usually apparent in the faces of the malarial cases; much less frequently in the typhoid cases.

In the severer and more prolonged fevers the changes in the blood became more pronounced, but with the increasing anæmia the number of parasites in the blood became distinctly less. Many of these cases

showed the *early* changes of pernicious anæmia, with extreme reduction of red cells, and poikilocytosis. A few such specimens showed a large number of parasites, which, with this type of anæmia, were usually scarce.

In many prolonged cases the blood showed the changes of secondary pernicious anæmia, with extreme reduction in number and marked variations in size of the red cells, and leucocytosis. It was extremely rare to find any considerable number of parasites in such specimens.

In several chronic cases the changes in the blood were indistinguishable from those of primary pernicious anæmia, megaloeytes with increased Hb constituting a large percentage of all red cells, and megalo-blasts being abundant. These changes had been established within six or eight weeks. Lymphocytosis, relative or absolute, was often observed in these and milder cases, and the eosinophile cells were often distinctly increased.

The evidence derived from the observation of these cases strongly indicates that the anæmia of severe malarial infection progresses for some time after the blood has been freed from parasites, a conclusion that is further borne out by the comparatively large number of deaths (ten) from anæmia and cachexia that occurred in cases showing no parasites in the circulation. The bearing of this fact on prognoses was well illustrated in some of the fatal cases, in which recovery was expected when the blood was cleared of parasites, yet the patients went on to die of progressive anæmia.

No uniform difference could be seen in the progress of the anæmia in the cases of æstivo-autumnal and those of tertian infection. If any existed, it seemed that the tertian infection was more severe in this respect than was the æstivo-autumnal. The anæmia in two fatal tertian cases was exceptionally severe.

The Fatal Cases.—Of six hundred and five cases of malaria, thirty-nine were fatal, at the General Hospital, six and a half per cent.; but it was impossible to estimate the full mortality of the disease, as many patients were transferred to city hospitals during the intervals of improvement.

Of these thirty-nine cases, twenty-five showed æstivo-autumnal infection, two tertian, two double infection with both varieties, and in ten no distinct parasites were found. In the æstivo-autumnal cases, rings alone were found in twelve, crescents alone in nine, and both rings and crescents in four cases. In six of the æstivo-autumnal cases there was dysentery, usually, but not always, amœbic. Four patients suffered from severe diarrhoea with catarrhal colitis. In eight cases there was intense jaundice, and the immediate cause of death in one case was pneumonia, and in another nephritis. The ten patients showing no organisms died from malarial cachexia, or from complications.

(To be concluded.)

POLYPUS OF THE UVULA.

By E. HARRISON GRIFFIN, M.D.,

LECTURER ON DISEASES OF THE NOSE AND THROAT
IN THE NEW YORK UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE;
ATTENDING SURGEON OF THROAT AND NOSE DEPARTMENT
OF BELLEVUE HOSPITAL OUTDOOR POOR, NEW YORK.

THE following interesting case came under my observation this month—interesting on account of its rarity, but more worthy of notice because it emphasizes the fact that an elongated uvula will not give rise to symptoms unless there is also a nasal catarrh at the same time.

If I were asked to name the most common operation on the throat in the hands of the general practitioner, I would say amputation of the whole or a part of the uvula.

On the other hand, if I were asked to name the most uncommon operation in the hands of the nose-and-throat specialist, I would say the amputation of the uvula.

The former traces the tickling in the throat that is such a common symptom of a nasal catarrh to an elongation of the uvula.

The specialist recognizes that the phlegm caused by an obstructive catarrh, whether the obstruction is caused by a deflected septum, the presence of nasal polypi, a hypertrophic condition of the turbinated bone, or an enlargement of the bone itself, lodges in the postnasal space, often covers the pharynx, and produces the tickling in the throat that the general practitioner traces to an elongated uvula.

I have amputated a part of the uvula in only three cases in the space of five years. In this time I have operated in thousands of cases for this symptom—namely, tickling in the throat—by removing some nasal obstruction and establishing nasal breathing.

The tickling in the throat is by this means arrested, and especially so if the patient should have been taught to use his handkerchief properly in wiping his nose, and to stop the habit of hawking.

The patient, a man, native of California, aged forty years, applied with an acute sore throat. An examination showed the patient suffering from follicular amygdalitis. In the examination I noticed the peculiar condition pictured below. The uvula was slightly longer than normal, and at its end was a large polypus. I called the patient's attention to his throat, and asked him how many sore throats he had had in his life.



This was his first. He never had a tickling in his throat, never hawked, and never had had occasion to have his throat treated before. Mr. X. was a very intelligent man and appreciated the purport of all my questions. He used his voice extensively in his busi-

ness, and did not know that he had any abnormal condition in his throat.

Here was a case where the polypus from the uvula almost reached to the epiglottis, and yet failed to produce the tickling, the cause of so many operations upon the uvula.

Suppose this patient had had an acute quinsy following a period of intoxication, an œdema of the uvula in this case would have enlarged it to such an extent that it would have acted as a plug with the swollen tonsils, and would most probably have produced death.

The cause of the polypus in this region is open to question.

Bosworth states, in regard to nasal polypus, that "the most rational explanation of the development of these growths is in the fact that the mucous membrane covering the middle turbinated bone is very soft, of delicate consistence, and is actively concerned in the respiratory function of the nose—viz., serous exosmosis—and as a result of this serous transudation the membrane becomes saturated or water-soaked, as it were, in such a manner as to lead to the development of the peculiar myxomatous condition." He further adds: "As to what peculiar nutritive disturbance in the meshes of the tissue predisposes to this form of degeneration, I have no suggestion to make."

The polypus was removed by an ordinary pair of curved scissors and forceps without any hemorrhage.

The polypus was an inch in length and about half an inch in diameter. This is the first case of polypus of the uvula that has come under my notice.

Papilloma of the uvula is quite common, and bifid uvula an everyday occurrence in the clinic.

112 WEST FORTY-FIFTH STREET.

THE ELECTRIC-ARC BATH.

A CLINICAL REPORT.*

By MARGARET A. CLEAVES, M. D.

THE necessity of the human body for light and air is of such universal recognition that it seems quite unnecessary to refer to it here. Human beings become bloodless and colorless when deprived of sunshine, and an impoverishment of the blood with a diminution of the red corpuscles and the hemoglobin ensues. With it all there is a loss of nerve force and the establishment of profound anæmic conditions.

The value of sun baths has been recognized and practised for ages past both in a desultory and systematic way, and their value is too well established to need comment. In the electric-arc bath there is to be had the most perfect approach to sunlight in existence. The results obtained clinically may be attributed to light,

heat, and ozone, to, in a word, radiant energy, but the combined activities at work are similar to those of sunlight.

It is impossible to supply sunlight to the inhabitants of large cities in proportion to their needs, but by the use of the electric-arc bath this lack can be at least partially combated.

The heat of an arc light is the greatest heat known, and its active horse-power energy is greater than that of the effective sun's rays at the surface of the earth.* The surface of the sun radiates ten thousand horse power per square foot of its surface; the earth receives only a third horse power per square foot, of which about a third is absorbed in the atmosphere, leaving about 0.25 horse power received at the surface of the earth. A good electric arc requires an expenditure of 0.6 horse power. The brightest part of the arc is a small area within the crater of the positive carbon.

The temperature of this brightest part is 6,300° F., and the area of its brightest spot is 0.1 inch square; a stronger current does not make this spot brighter or hotter, it merely makes it larger, and this is the place which radiates most of the energy and is comparable with the sun for brightness. An arc having a crater of one square foot in area would radiate 8,640 horse power, which is nearly the observed amount from the sun; if the crater is taken to be a trifle smaller than 0.1 inch square, say a twelfth of an inch square, then the resulting figure per square foot would be 12,441 horse power, which is in excess of the sun's rate.

During the activity of an arc ozone is constantly produced in greater or less quantities, according to the source of the E. M. F., whether continuous or alternating.

With the alternating current a greater quantity of ozone is generated than with a continuous current arc.

The arc is to be preferred as a therapeutic measure to the incandescent lamp because of the generation of ozone, and also because it gives a spectrum containing in greater quantities all the numerous rays from the deepest red to ultra violet, and especially of the latter.

The healthfulness of the air, especially in the mountains or at the seashore, is due to the great proportion of ozone present.

Ozone has been made the subject of extensive scientific research, and the literature of the subject is both interesting and exhaustive. The scope of this paper does not permit, however, even a brief review of the data thus obtained. It is quite enough here to briefly call attention to the following facts:

Ozone is oxidized in decomposing all substances with which it comes in contact; it is very little soluble in water, coagulates albuminoid matter†, and is almost completely insoluble in this compound. The experi-

* Read at the eighth annual meeting of the American Electro-Therapeutic Association, Buffalo, September 13, 14, and 15, 1898.

• Professor Bullock.

† *Revue internationale d'électrothérapie*, Jan. 6th, 1894, p. 191.

ments of Messieurs Labbe et Oudin go to prove that ozone has an action upon microbes when they are in distilled water, for example, but when in a solid culture medium they are protected by the surrounding substance.

Ozone is dissolved with difficulty in the gelatin water, and that which is dissolved is destroyed in oxidizing the culture medium, thus forming a barrier to its passage into the mass and protecting the subjacent organisms. This they believe is the reason for the varying opinions held as to its antiseptic properties.

The physiological action of ozone is to increase the number of red blood-corpuscles, the hemoglobin, and also the urica, and to establish nutritive changes. There is a difference of opinion as to whether the action of the ozone is a directly physical one or not. In the experiments made by Labbe and Oudin, it was shown that fifteen days elapsed before the red corpuscles were increased.

The value of inhalations of ozone in phthisis and bronchitis, as well as in anæmia and general malnutrition, has been proved beyond question. Dr. Collard,* at the Hôpital des Anglais, noted a marked improvement in the condition of tubercular patients submitted to inhalations of ozone, who were not attacked by hectic fever or purulent auto-infection. M. Labbe and Oudin, as well as others, have obtained the same results. In inhalations of pure ozone from apparatus designed for that purpose an irritation is very apt to be set up within the bronchi, giving rise to an irritative cough, which is sometimes prolonged for hours, and which will, while it lasts, unfavorably influence the appetite and digestion. When administered in too concentrated a form a certain exhaustion supervenes which has been compared by experimenters to that of a person under the influence of chloroform after an operation.

The untoward results which have been noted from the use of inhalations of pure ozone—i. e., hæmoptysis, irritation of bronchial mucous membrane, and impairment of appetite—have not obtained from the action of ozone as generated by the electric arc, or from the convective discharge of an influence machine when diffused in the air of the room, but only when administered in a concentrated form.

Light, objectively, and heat as well,† consist of to-and-fro vibrations of the universal ether, and these vibrations are now universally believed to be of an electro-magnetic nature in their mechanism—that is to say, that the vibrational activity in the ether is both electric and magnetic. It may be that in addition to the other influences at work, there is an action due to this electro-magnetic field. What effect, if any, the metal lining of the bath cabinet may have by reason of its relation to this electro-magnetic field the writer does not know.

There is no doubt but that in man, as well as in plants (evidenced by numerous experiments made upon growing plants), there is obtained an action upon protoplasmic activity by exposure to electric light. Numerous experiments have been made by M. d'Arsonval, Klebs-Löffler, P. A. Khmelevsky, of St. Petersburg, Theodore Geisler, Dr. H. Marshall Ward, of London, and others, which show that both sunlight and electric light have an action upon various bacterial growths. It has been satisfactorily demonstrated in all of these experiments that the inhibitory influence upon the growth of microbes has been from the actinic or chemic rays and that there is no action whatever in the infra red, orange, or yellow region.

Exposure to an electric arc, if exceptionally long, is followed by a condition similar in every respect to that of sunstroke, which has been characterized as an electric sunstroke.

Lavrand* reports the case of an engineer who remained exposed for about an hour at a distance of about three feet to the rays given out by two connected arcs under a current of fifteen ampères. His situation is described as being in that part of the cone of rays where the light was least, but the chemical activity the greatest.

Three hours afterward he felt a tingling in his eyes and soon presented all the symptoms of sunstroke, laceration, redness of the skin of the face, and tingling, and then very severe supra-orbital neuralgia.

The blistering of the skin in the cases treated by the electric arc, as reported by Kozlovski, and also the sunburn following exposure to its influence, are due to the actinic and chemic rays and not to the heat.

For some time it has been regarded as possible to use electric light under such conditions as to make it fairly comparable to sunlight in its power of promoting protoplasmic activity in plants, and the clinical work done thus far substantiates the same for human beings. Whether the form of cabinet used for the electric-arc bath is best for the purpose remains to be seen.

The cabinet used by the writer is six feet long, two feet and a half wide, and seven feet high, built in the corner of one of the office rooms. It is entirely closed in, save for an observation window, which can also be utilized for the admission of fresh air if desired, and is lined with zinc throughout in order to prevent any danger of fire from a fragment of burning carbon. Both ends are fitted up with glass compartments in which are suspended the arc lamps, two in number. These compartments are so arranged that the doors may either be closed or opened. In the latter instance the ozone would be eliminated from the bath. As a matter of fact, they have been used thus far with the doors swung open. The cabinet contains an ordinary wire mattress cot, which is made up as a bed, and upon which the patient reclines. At the New York Electrotherapeutic Clinic

* *Revue internationale d'Électrothérapie*, November, 1893.

† *Electricity in Electrotherapeutics*, Houston and Kennelly.

* *Journal des sciences médicales de Lille*, May 2, 1898. *Presse médicale*, June, 1898.

the lamps are on the Thomson-Houston alternating current mains of a hundred and four volts, and each lamp takes nine amperes at forty-eight volts, the remaining eight volts being consumed in the rheostat.

In the writer's office the current is taken from the Edison incandescent mains of a hundred and twenty volts, and each lamp takes about ten amperes at fifty volts, the remainder being consumed in the rheostat.

Each lamp is provided with a reflector, in order, if indicated by the pathological condition, that the light may be focused on a given part of the body.

It is best that the zinc lining should be painted white in order to facilitate the reflection of light, and as the patient lies at rest in the bath he is bathed in a sea of light equivalent to about four thousand candle power.

The patient is preferably nude, although the applications are sometimes made with only a partial undressing. The eyes are protected by means of colored glasses, and, if desired, the hands may be protected also to avoid any chance of sun burn.

All patients, but especially phthisical and bronchial patients, are directed to breathe in fully and deeply while lying in the bath.

When the same uniform results are secured in a greater number of cases, an effort will be made to rearrange the methods of using and to eliminate certain factors in order to reach more accurate conclusions as to the exact relation between cause and effect.

No definite conclusion has been reached by the writer as to the specific influence at work to produce the changes which have been observed clinically; that ozone plays a large and important part does not, however, admit of question. The influence of a dry climate is also too well known to admit of discussion, and the benefits obtained by a residence in Colorado are believed to be largely due to the dryness of the atmosphere discouraging the growth of bacilli, as well as to the influence of the high altitude in increasing the blood supply to the lungs and improving nutrition.

Experiments have been made showing that an exposure of the *Bacillus tuberculosis* to the action of the solar rays results either in their destruction or diminished vitality. Light is also opposed to their development.

In an electric-arc bath there is an expenditure of energy similar in physical character to an expenditure of energy of the solar rays. It would almost seem that the action which takes place as the result of this expenditure must be a directly oxidizing one; for with the beginning of treatment, even from the first bath, there is a diminution of cough and expectoration.

Nutritive changes manifest themselves later, and may result directly from a stimulus to the pulmonary surface with an increased blood supply to the lung, or later from an increase of red blood corpuscles and hemoglobin in the general circulation.

Patients uniformly present an appearance of being rested and refreshed when subjected to the influence of the electric-arc bath. By its use circulatory changes are established with a uniform regulation of the heart's action, as shown by improved volume and slower rate of pulse; temperature is temporarily augmented; activity of the skin increased; respiration notably improved, fuller and slower, with gradually increasing respiratory capacity; irritability of bronchial mucous membrane promptly lessened, as evidenced by diminution of cough and expectoration.

The stimulus imparted results in a more active dissimulation, as evidenced by increased urea and CO_2 elimination, but is balanced by an equal assimilation, shown by improved nutrition and function.

In an analysis of the cases submitted with this paper it is noted that the establishment of the nutritional change is most marked at about the end of the second week of treatment, which so far as the action of ozone is concerned confirms the observations of Labbe—i. e., that the increase of red blood-corpuscles and hemoglobin is established about the fifteenth day.

In diseases of the respiratory system there has been noted, however, a marked effect from the administration of the first bath upon the cough and expectoration—i. e., a diminution in both. No drugs were given in any of the cases reported, save as mentioned.

After improvement had been established in several cases of phthisis by the action of the electric arc, independent of all other means, the treatment was supplemented by the use of the franklinic current, positive insulation, convective discharge with the crown electrode for from ten to fifteen minutes and with the brush electrode to the entire general surface (nutritional), localized to the chest walls front and back (lungs). The principle involved is the same as in the administration of a cold douche after a hot bath—i. e., to stimulate the electromotive forces of the relaxed skin or tone it up. It is not known that the ultimate results have been bettered by the use of the convective discharge, but as a prolonged exposure to the influence of the arc may be followed by undue relaxation, this has seemed the wisest course to pursue.

The electric arc is being used to some extent in Europe, and was introduced first into France by Imbert de Latouche, of Lyons,* who constructed an arc light cabinet upon the same principle and upon the description furnished him by the writer.

Recently Kochovski,[†] in *Vratch*, has published an account of the treatment of rheumatism and neuralgia by means of exposure to the electric arc. He was induced to make some observation, by the statement of Ewald (medical officer to some linen works), who had noticed that with the introduction of electric weld-

* *Revue internationale d'électricité médicale*, April and May, 1896.

† *Journal des Sciences Médicales*, Vol. 1, No. 1, July 2, 1898.

ing there had been a notable diminution in the number of cases of rheumatism, neuralgia, and migraine, and other nervous disease among the workmen. He attributed it to the beneficial effects of the electric light. Kozlovski at once, in order to bring the electric arc as a therapeutic agent within the reach of his ordinary patients, fitted up his consulting room with a suitable plant and began making his observations. His practice was to place the patient a metre and a half from the light, to protect the eyes with blue spectacles, and also to use a screen of cardboard through which an aperture was cut so as to allow the light to flow upon the affected region of the body. The exposure was from three fourths to two minutes. The patient feels a slight sensation of heat, though the temperature is never raised more than 4° F., where the light falls on the skin. Nothing more is felt until six or eight hours afterward, when itching and tingling are felt and the skin is reddened. Some forty-eight hours later desquamation occurs, which lasts for two or three days. In the course of three months Kozlovski treated thirty-eight patients from thirteen to seventy years of age. There were three cases of sciatica, all of which recovered; four of neuritis, locality not stated, two of which recovered; eighteen of chronic rheumatism, fourteen of which recovered; three of lumbago, all of which recovered; three of occipital neuralgia, of which two recovered; and two of trigeminal neuralgia, one of which was greatly benefited. In most cases three or four sittings produced an amelioration of the pain.

They were continued at intervals of three or four days, according to the amount of cutaneous irritation, but the total number of sittings never exceeded a dozen.

M. Below,* in a recent paper read before the Medical Society of Berlin, reports a hundred and twenty-two patients treated by means of arc and incandescent light baths with sixty-seven cures, thirty-six improvements, and nineteen without results. The best of results were obtained in lupus, ulcers of the legs, muscular rheumatism, and syphilis, while in vascular naevi, pruritus of scrotum and glands, cancer, sarcoma, alopecia, atrophy of optic nerve and cataract, no results were obtained. He attributed the action in syphilis to the profuse perspiration induced and referred to the habit of natives with syphilis, in Hayti and on the coast of Mexico, of covering themselves with sand on the sea beach and exposure to the sunlight while they drink quantities of tea to stimulate perspiration, as exercising a similar influence. In this idea he was not supported by his *compères*, and such curative action as resulted was attributed by them to the heat of the sun's rays, not to perspiration.

M. Below found that a temperature of from 75° to 167° F. is tolerated without disturbance of any sort,

where alarming phenomena present themselves from the use of other methods, and concludes that it is a desirable means of inducing activity of the skin where, because of asthma or cardiac lesions, the usual methods are contraindicated.

The electric arc has been used by the writer in the treatment of anæmia, chorea, eczema, and psoriasis with general malnutrition, but the most extended observations have been made in diseases of the respiratory tract—*i. e.*, subacute bronchitis, bronchial asthma, acute and chronic phthisis.

The cases reported are from the writer's case book, and also from the records of the New York Electrotherapeutic Clinic.

The equipment of both office and clinic is of so varied a nature that other means of treatment have usually been selected for the average case, and therefore the electric arc has not been utilized to a great extent, save in respiratory troubles, and considerable interest has been manifested in its use in this class of cases.

Very many subjects of phthisis find it impossible to leave their homes; their families need them, and, as one patient put it, "to be sent from home is to be deprived of hope and condemned to despair." Therefore everything that offers a chance of improvement without climatic change should be tried.

The writer has no thought that in the electric arc a panacea for this trouble is to be found—far from it; but the uniform results obtained in the series of cases reported suggest its probable value in curative cases. Much more extended observations will be made during the coming year; and the evidence secured, subjective and objective, must speak for itself.

While in an electric-arc bath there are light, ozone, and a dry, hot atmosphere, like that of a midsummer's day, the writer would reiterate that she offers no opinion as to the relation between cause and effect. That is reserved for further study and investigation, in which the physioist must aid the physician.

(To be concluded.)

TYPHOID INFECTION WITH PRIMARY FOCUS IN THE GALL BLADDER.

By ROBERT T. MORRIS, M. D.

FÜTTERER makes a claim for priority in the discovery of the *Bacillus typhi abdominalis* in the gall bladder. His observations on two cases were published in the *Münchener medizinische Wochenschrift*, 1888, No. 19, under the title *Untersuchungen über Typhus Abdominalis*, and he expresses the opinion that relapses of typhoid fever are caused by typhoid bacilli entering the intestine with the bile.

A case which is apparently corroborative of Fütterer's views has recently occurred in my practice. On September 21, 1898, I was called in consultation by Dr. R. E.

* *Revue internationale d'Electrothérapie*, March, April, May, 1898, p. 279.

Doran, of Willard State Hospital, to see Mr. J. L. B., twenty-six years of age, who had been suddenly seized, forty-eight hours previously, with a sharp pain below the right inferior costal margins, which rapidly extended as an acute general peritonitis, with a temperature reaching 102° F., but apparently without accompanying rigors. The patient was constipated until the day on which I arrived. On examination a mass was easily palpated at the site of the gall bladder, and the peritonitis seemed to be most intense at that point. We diagnosed empyema of the gall bladder and operated. The peritoneum was deeply congested and was covered with coagulated lymph in the vicinity of the gall bladder. The gall bladder was distended with a mixture of thin, greenish mucus and thick, tenacious yellow pus. I did not have my culture tubes at hand and no bacteriological examination of the pus was obtained, much to my regret. I drained the wound and the gall bladder with a small wick drain and closed the incision, excepting for the drainage opening. On the evening of the day of operation the temperature rose to 103° F. and dropped on the following morning to 100° F.; pulse, 88; respirations, 24. On the evening of the second day after operation the temperature rose to 106° F. Up to this time the bowels had not moved, but two high enemata of Epsom salts caused a number of loose movements, and the symptoms of dangerously progressive infection subsided rapidly. After this the symptoms of typhoid fever supervened, and the case ran a typical course as one of typhoid fever, ending in recovery in about four weeks, excepting for a small biliary fistula, which was closing spontaneously at last reports from Dr. Doran.

49 WEST THIRTY-SIXTH STREET, December 21, 1898.

INTRAVENOUS SALINE INJECTION IN SEVERE HÆMORRHAGE.

By J. O. COBB, M. D.,

PARMED ASSISTANT SURGEON, U. S. MARINE HOSPITAL SERVICE.

THE following experiments were made for the purpose of demonstrating:

1. The case with which the operation can be performed.
2. The condition of the blood after severe hæmorrhage and injection of saline.
3. The point where it is hopeless to expect favorable results from saline injection.
4. The different temperatures at which the solution may be injected without noticeable harm.
5. The pressure effects of the saline solution on the circulation.
6. The effects of saline injection, while at the same time administering oxygen by inhalation.

It is an easy matter to improvise the apparatus. I took a blowpipe from the post mortem case and boiled it. An ordinary curved medicine dropper would answer the purpose as well. A large bottle was used, and the solution siphoned out with a rubber tube, no precaution being taken to prevent air getting into the circulation nor to prevent infection. An ordinary self-injecting bulb syringe may be used for the injection; or, if one has

an aspirating case, the current of air may be reversed, turning the bottle upside down, and the fluid injected through the needle into the vein.

There are many ways in which the ingenious surgeon could introduce the saline solution. No patient should be allowed to die from the effects of hæmorrhage without at least a trial of saline solution.

Attention is called to the operation as it is usually performed on a patient, if one has the time and is prepared for such an emergency as hæmorrhage.

Thoroughly scrub the arm and prepare the field as carefully as would be done for any operation. If the patient has bled much, it will not be an easy matter to find the veins, as they are collapsed and colorless. Make the incision over the course of the vessels down to the subcutaneous fat and then cut directly across the course of the veins. If there is any trouble in finding the veins in the arm, a large vein can always be found in the leg—the saphenous.

The instruments needed are few. The cannula sold by instrument makers for this purpose is the most convenient. After finding the vein, pass two ligatures around it about an inch apart. Start the fluid through the tube, and then cut into the vein with sharp-pointed scissors between the two ligatures. The solution must be kept running while the cannula is being inserted to prevent the introduction of air. Immediately tie in the cannula, not cutting off the suture; the other is tied and cut off. After the solution is introduced, dissect up about two inches of the vein, put on another suture, and cut out that part of the vein between the two sutures. Any vessel which is graduated, such as a large funnel or bottle, will answer the purpose of holding and marking the amount of solution being introduced.

EXPERIMENT I.—Male dog; weight, thirty-seven pounds and three quarters; hæmoglobin, ninety-five per cent.; red cells, 4,500,000.

July 10th.—Bled from right external jugular until respiration and heart's action ceased. Amount of blood withdrawn, 900 c.c. Saline injected, 1,200 c.c. Temperature of solution, 57° C. In five minutes dog regained his feet and drank water, but would not eat during the day.

11th.—Just twenty-one hours after operation, weight, thirty-seven pounds; hæmoglobin, thirty-two per cent.; red cells, 1,300,000. Hungry and eats well, but does not seem to desire water.

12th.—Same as yesterday, but still weak.

14th.—Doing well, apparently none the worse for the operation. Slight suppurative.

16th.—Hæmoglobin, thirty-nine per cent.; red cells, 2,800,000; weight, thirty-nine pounds and a quarter.

23d.—Hæmoglobin, forty-five per cent.; red cells, 2,800,000; weight, forty-three pounds.

From the first there was a marked leucocytosis, the red cells very pale and smaller than normal.

EXPERIMENT II.—Male dog; weight, forty-three pounds; hæmoglobin, ninety-five per cent.; red cells, 5,000,000.

July 12th.—Bled from both external jugulars, taking 800 c.c. from left side in five minutes and 500 c.c.

from right side in eleven minutes. The veins were widely opened and allowed to bleed without interference. Twelve minutes after bleeding had stopped from vein, opened femoral artery, from which no blood flowed. Nine minutes later dog had ceased any motion whatsoever and seemed to be dead. Two thousand cubic centimetres of saline solution at 48° C. were injected. Dog began to breathe; but, unfortunately, a very large quantity of air was accidentally introduced into the vein before it was discovered. The dog died in a spasm.

EXPERIMENT III.—Male dog; weight, ninety-four pounds; hæmoglobin, ninety-seven per cent.; red cells, 5,000,000.

July 13th.—Bled from right, at same time running saline into left external jugular. After bleeding to the amount of 500 c. c. the blood began to come through, a bright, cherry red, showing that the saline was in the circulation. As the bleeding progressed the blood became thinner and redder. This fluid did not coagulate at all, and what little blood there was in this solution very quickly settled, leaving it clear on top. It had been the intention to bleed this dog to death, but at this point the experiment ceased because the apparatus did not work properly.

Amount of blood withdrawn through the veins, 4,400 c. c. Amount of saline introduced, 3,700 c. c. Temperature of saline, 52° C. The dog was able to move about in a few minutes. Five hours after would not eat, but drank water often. Twenty-four hours after, hæmoglobin, thirty per cent.; red cells, 2,000,000; weight, ninety-one pounds. Eats and drinks well.

16th.—Some oozing into the dressing. Dog doing well. In the evening there was considerable hæmorrhage from the wound on left side. Dog etherized, and bleeding point, a small vein, ligated.

19th.—Hæmoglobin, twenty-two per cent.; red cells, 2,100,000; weight, ninety-three pounds and three quarters. Several tests were made to confirm the percentage of hæmoglobin. The blood count was made with the hæmato-crite, and from some cause probably was not even approximately correct.

21th.—Marked leucocytosis. Red cells are very pale, irregular in shape, and of different sizes.

29th.—Examination of stained specimens of blood showed red cells, irregular, and of different sizes; the smaller and a few of the larger white cells took the tri-acid stain very deeply, while others alongside of them took the stain poorly.

30th.—Hæmoglobin, forty-three per cent.; red cells, 3,300,000; weight, ninety-three pounds. Even at this date there is marked leucocytosis. The dog is apparently in good health; eats well and is playful.

EXPERIMENT IV.—Female dog; hæmoglobin, eighty per cent.; red cells, 4,000,000; weight, thirty-three pounds and a half.

July 15th.—Bled from right external jugular, at same time running saline into left external jugular. The saline was run in much faster than the blood ran out, for the purpose of raising the blood pressure. The right external jugular was ligated on the cardiac side of the wound to prevent regurgitation from the opposite side. The flow of the blood was noticed to rise and fall with raising or lowering the bottle of saline. In all the experiment the flow from the vein could be made to rise or fall by raising or lowering the bottle. Amount of blood withdrawn, 3,000 c. c. Amount of saline introduced, 5,600 c. c. Temperature of saline, 52° C.

Length of time bleeding was carried on, nineteen minutes.

Note.—After withdrawing 800 c. c. of blood, it was noticed that it began to come through much lighter in color and thinner. It shortly ceased to coagulate. The last of the fluid withdrawn was almost pure saline solution, just tinged with blood. It was noticed that the cherry-red coloration ceased shortly before this. I did not know the significance of this fact at the time, but other observations show that in every case, when the cherry or rose color disappeared from the flow entirely, not one dog recovered. Several tubes full of air got into the circulation by accident. I think it made no difference in the result. Respiration gradually got weaker, and ceased in twenty minutes. The pressure of the large excess of fluid in the circulation may have caused the fatal termination.

Necropsy (four hours after death).—Heart and great blood-vessels well distended with fluid colored much like watered port or blackberry wine. There was not a clot in the veins or heart. Lungs collapsed. Veins of mesentery full of air bubbles. Bladder full of urine.

EXPERIMENT V.—Male bulldog; hæmoglobin, eighty-nine per cent.; red cells, 4,700,000; weight, thirty-four pounds.

July 18th.—Bled from right external jugular, at same time injecting saline on the other side. Bleeding continued for ten minutes. Amount of blood withdrawn, 2,650 c. c. Amount of saline introduced, 3,000 c. c. Temperature of solution, 55° C.

Note.—After withdrawing about five hundred cubic centimetres of blood, it began to come through very much brighter. At about 1,800 c. c. the fluid withdrawn was beginning to darken, and in a short while was port-wine color.

Dog died in a spasm while the bleeding was going on. It was noticed that the pressure of the column of saline in the bottle forced the stream through for some time after the dog's heart and breathing had ceased.

EXPERIMENT VI.—Female dog; hæmoglobin, ninety per cent.; red cells, 4,700,000; weight, thirty-four pounds.

July 19th.—Bled from right femoral artery, at same time running saline into left external jugular. Bleeding continued seven minutes and a half.

Amount of blood withdrawn, 1,000 c. c. Amount of saline introduced, 1,800 c. c. Temperature of saline, 54° C. The color of the arterial blood was also modified by the saline being much brighter. In a very short time the solution showed its presence in the blood withdrawn. The last of the fluid withdrawn was nearly pure saline, being hardly perceptibly colored. The dog died in a short spasm, the heart first ceasing to beat.

Note.—The effects from arterial hæmorrhage are more serious than from venous.

Necropsy (immediately after death).—Lungs collapsed. Heart ceased in systole. The fluid in veins cherry red. Bladder full of urine.

EXPERIMENT VII.—Male dog; hæmoglobin, eighty-five per cent.; red cells, 3,800,000; weight, thirty-seven pounds.

July 20th.—Dog thin and not in good health. Bled from right jugular, at same time solution injected into left. In a very short time the color of the blood was modified, but the cherry red soon disappeared, and the fluid came through dark. Amount of blood withdrawn, 1,250 c. c. Amount of saline introduced, 1,675 c. c. Temperature of saline, 48° C. When the operation

ceased the dog was in very bad condition. Lived twenty-five minutes. The heart and respiration became weaker and weaker; the heart ceased to beat several minutes before the gasping respiration entirely ceased.

Note.—Every dog has died when the bleeding has been carried on to the point where fluid has come through dark, like watered port wine.

EXPERIMENT VIII.—Male dog; hæmoglobin, seventy per cent.; red cells, 4,100,000; weight, forty-five pounds and a half.

July 21st.—Bled slowly from left jugular. Heart ceased to beat in five minutes and a half. The heart acted badly from the very first, and the respiration was very jerky, and remained so for hours. When 750 c.c. were withdrawn the dog seemed to be dead, with the exception of an occasional gasp. Amount of blood withdrawn, 750 c.c. Amount of saline injected, 900 c.c. Temperature of saline, 50° C.

Note.—After operation the dog's breathing was very bad. It lay stupid for some time; the respiration was very erratic, and would entirely cease at times. The conjunctivæ were sensitive all the time. Forty-five minutes after the operation the dog got up and walked about for a short time, but was very unsteady. About an hour later had a very severe chill, which lasted for three hours. Drank considerable water.

22d.—Dog very weak, but eats and drinks.

23d.—Hæmoglobin, thirty-four per cent.; red cells, 2,200,000; weight, forty-four pounds; marked leucocytosis. In ten days' time dog back to normal health. The count was up to about 4,000,000, and hæmoglobin, eighty per cent., but the notes were lost, and the statement is from memory.

EXPERIMENT IX.—Male dog; hæmoglobin, seventy-four per cent.; red cells, 4,200,000; weight, thirty-eight pounds and a half.

July 25th.—Bled from right jugular, at the same time running saline into left jugular. Bleeding continued nine minutes. Amount of blood withdrawn, 1,300 c.c. Amount of saline injected, 1,100 c.c. Temperature of saline, 48° C.

Note.—Whenever the respiration became very weak oxygen was given by forcibly distending the lungs with the gas. The method of introducing the gas was by a tube into the trachea after a tracheotomy, the larynx and external wound being closed by a small rubber bag, which was inflated. The method was not altogether satisfactory, as the tube and bag had to be withdrawn to allow expiration. The effect of the oxygen was very pronounced, causing the respiration to become full and strong in a very short time. Five gallons of gas were given, all we had prepared. The dog lived about three hours after the last oxygen had been given and could undoubtedly have been kept alive by constant inhalation of the gas.

EXPERIMENT X.—Male dog; hæmoglobin, eighty per cent.; red cells, 4,500,000; weight, thirty pounds.

July 28th.—Bled from right external jugular until blood ceased to flow. The vein was widely opened to allow rapid bleeding. In three minutes heart beats could not be felt, and bleeding ceased entirely. Respiration jerky and shallow. The amount of blood withdrawn at this time was 600 c.c. Very rapidly seven hundred cubic centimetres of saline solution were introduced, and oxygen was given by means of a bag fastened around the head. It was interesting to observe the dog's very rapid recovery. In less than a minute he was struggling, and in a short time it was necessary to reanesthet-

ize him to be able to proceed with the experiment. As soon as anesthesia was again produced, the left external jugular was opened and 200 c.c. of blood withdrawn. The dog very soon fainted, and the blood began to darken. Oxygen was then given, together with 300 c.c. of saline, at a temperature of 44° C. The oxygen was given for three minutes, at the end of which time the dog was struggling. In five minutes he walked around and was quite lively. It is worthy of note that the effects of a secondary hæmorrhage in this and other cases seem far more serious than those of a primary, and, undoubtedly, the inhalation of oxygen is a necessary adjunct to the saline in saving life after very severe primary or secondary hæmorrhage.

29th.—Hæmoglobin, twenty-seven per cent.; red cells, 1,800,000; weight, twenty-eight pounds and a quarter. Rather weak, but eats and drinks well.

August 3d.—Hæmoglobin, thirty-three per cent.; red cells, 2,200,000; weight, twenty-nine pounds. The dog made a perfect recovery.

EXPERIMENT XI.—Male dog; hæmoglobin, ninety-seven per cent.; red cells, 5,000,000; weight, thirty-four pounds.

July 29th.—Bled slowly from right external jugular. Blood ceased to flow in twelve minutes, 800 c.c. being withdrawn. The heart could not be felt, respiration jerky and weak. Waited ten minutes, then opened the left external jugular, from which there oozed 100 c.c. of blood. The time consumed in obtaining this last blood was ten minutes. With the exception of an occasional diaphragmatic spasm the dog was, to all appearances, dead. The oxygen bag was adjusted and the saline solution started into the vein, and oxygen given by inhalation. The heart began to beat strongly by the time that 500 c.c. were introduced. The respiration and heart's action were fairly good, just one minute from the time the saline and oxygen were started. The dog had regained consciousness before the dressings were applied. Two hours later drank large quantities of water, but ate nothing all day.

30th.—Hæmoglobin, thirty-five per cent.; red cells, 2,500,000; weight, thirty-four pounds. Dog stupid and weak; lies down most of the time. Refuses to eat, drinks water, but refuses milk.

31st.—Dog forced to take milk. Still very weak.

August 1st.—Improved somewhat, but still very weak. Refuses to get up.

2d.—Seems quite sick. Gave Rochelle salts, 450 grains, at once.

4th.—Bowels moved for the first time in six days. Began to eat. Has lost weight; very weak.

5th.—Hæmoglobin, thirty-eight per cent.; red cells, 2,500,000; weight not noted. The dog made a perfect recovery.

EXPERIMENT XII.—Male dog; hæmoglobin, ninety-seven per cent.; red cells, 5,100,000; weight, thirty five pounds and a half.

August 1st.—Bled from right external jugular, and at same time saline run into left. Amount of blood withdrawn, 1,200 c.c. Amount of saline injected, 2,000 c.c. Temperature of saline, 43° C. Oxygen given at same time blood withdrawn. The bleeding was continued about fifteen minutes, and escaping fluid was nearly pure saline. Color bright red throughout. The experiment was not continued because the oxygen gave out. The apparatus was working unsatisfactorily, and several tubes full of air went into the circulation with an audible sound. The dog got up and walked around,

then lay down. An hour and a half later the attendant found the dog dead. It is not known what killed him, or just how he died.

Notes.—It is not necessary to take accurately the temperature of the saline solution, if one is in a hurry.

If the solution feels comfortably warm to the finger, no harm will result from its introduction. The temperature should be about 114° F., but if it is 125° F. do not lose time in cooling it.

It was astonishing that no apparent harm resulted from the introduction of saline solution at the extremely high temperature of 130° F. One would naturally believe that such a temperature would coagulate the albumin and seriously damage the red cells.

Saline given with oxygen will save almost hopeless hæmorrhage cases.

Do not waste time in getting the solution into the circulation.

It is urged that the solution be introduced into a vein, after a severe hæmorrhage, in preference to the slow method of subcutaneous injection.

To furnish as much blood as possible for the purpose of carrying oxygen, bandage tightly the extremities, thus forcing the blood in the capillaries back to the heart. The introduction of small quantities of air into the circulation seems to make no particular difference, for undoubtedly air was introduced into the circulation of all the dogs in these experiments.

All dogs urinated after the pressure had been reinstated by the saline solution. The question of overdistention of the heart must not be ignored by introducing too much saline, for the pulsations became "running" when there was excess of solution. So far as we could tell, the dogs that recovered urinated more frequently, and passed a greater quantity of water than normal, for thirty-six hours after the operation.

Do not let the patient die while the solution is being sterilized. Be prepared for such emergencies; if not, introduce the solution without sterilization, if the case is urgent.

If one does not have time to weigh the salt, take a tablespoonful and toss it into two pints of water.

It is an easy matter to be prepared for an immediate saline injection, for Parke, Davis, & Co. are now preparing sterile normal saline solution, put up in ounce bottles, which, added to the necessary amount of water from the hydrant, kettle, or sterilizer, makes the solution ready for instant use.

The saline solution used was sodium chloride, seven grammes to a thousand cubic centimetres of water.

From these experiments one is led to believe that in opium poisoning it would be advisable to withdraw five hundred cubic centimetres of blood and introduce five hundred cubic centimetres of saline solution.

In the early stages of pneumonia it seems reasonable to believe that the withdrawal of blood, and replacing it with normal saline solution, would relieve the tension of

the pulmonary circulation in the early stages, and would furnish a fluid which would more readily take up oxygen.

The blood count was made with the hæmatocrite, and the hæmoglobin tests were made with von Fleischel's hæmometer. The tests, of course, are only approximately correct.

The blood counts and hæmoglobin tests showed great variations, probably due to the fact that some of the dogs had been kept in the pound until they were sick.

Saline solution and oxygen in uræmic convulsions or threatened eclampsia has already been proved the most efficacious treatment for these terrible complications.

The above experiments were not completed as intended, as I was called to other duties, necessarily interrupting the work. It was the intention to investigate the effects of saline solution in opium poisoning and induced pneumonia in dogs.

I have to acknowledge the very great assistance rendered by Dr. W. W. King, interne, and Mr. E. S. Maguire, hospital steward, United States Marine Hospital, Detroit, Michigan.

DETROIT, September 10, 1898.

Therapeutical Notes.

A Soothing Ointment.—The *Clinica moderna* for November 23d gives the following formula:

R Benzoinated lard	40 parts;
Laudanum	4 "
Chloroform	3 "
Extract of belladonna	2 "
Extract of cicuta	1 part.

M.

Formalin in the Treatment of Hyperidrosis of the Feet.—Gerdeck (*Morgagni*, 1898, No. 41; *Riforma medica*, November 15th) advises painting the feet three times a day with from fifteen to twenty-five drops of formalin.

Urethral Anæsthesia by Rectal Injections.—M. Scharfe (*Gazette hebdomadaire de médecine et de chirurgie*, December 18th) recommends the following:

R Hydrochloride of morphine ...	2½ grains;
Sulphate of atropine	⅓ grain;
Distilled water	750 minims.

M. For external use.

An intrarectal injection of from thirty to sixty drops of this liquid is made to produce insensibility of the posterior urethra.

For Vertical Headache in Women.—According to the *Richmond Journal of Practice* for December, Dr. L. Duncan Bulkley recently stated at the New York Academy of Medicine that experience had taught him the fact, which, however, he could not explain, that full doses of strong nitric acid, five drops three times daily, properly diluted, almost invariably gave complete and prompt relief from that very common complaint of vertical headache and flushings in women.

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THE STERILIZATION OF WOMEN.

THE subject of the indications that justify the sterilization of women, with a description of a new procedure for the effecting of that end, forms the subject of an article by Professor P. G. Spinelli in the *Archivio italiano di ginecologia* for October 31, 1898. The question is one of great importance, not only as regards the individual, but also from the standpoint of racial economy.

It is too often assumed that the procreation of children is the sole, or at least the primary, ground of marriage, and there is a strong tendency in the present day to subordinate entirely the rights, emotions, impulses, and passions of the individual to ethnical considerations.

Now, it is beyond doubt that with our present knowledge of the hereditary element in disease, whether physical or psychological, the community has a right to take some measures to protect itself against the reproduction of degenerates, as it has against any other danger that threatens to deteriorate the race. It is such a motive, undoubtedly, that animates the various attempts which from time to time occur to effect legislation prohibiting syphilis, tuberculous subjects, epileptics, etc., from marrying.

Unfortunately, the prohibition of marriage, when all that can reasonably be demanded by the State for its own protection is a prevention of procreation, is the only remedy commonly held out. But marriage, as we have before had occasion to remark, has higher and greater aims than even the procreation of children—viz., the mutual comfort, consolation, and support of two beings of opposite sexes who are, in a rightly assorted marriage, the proper complements of each other, without which union the life of either is, and must necessarily be, incomplete. Neither is the act of sexual congress usually primarily viewed in the mind of man or woman as a means of procreation; but rather as the closest, highest, most intimate embrace and demonstration of love and devotion possible to human nature and dependent for its purity upon its motive. This point of view neither contemplates nor justifies the mere gratification of passion in a physical sense, the experiencing of physical sexual pleasure, for that is the motive of the mere sensualist and debauchee. It is based, rather, on the natural individual instincts that attract one man to one

woman wholly and entirely, in all relations, mental, emotional, and physical.

It is obvious, therefore, that the prohibition of union as a means of protecting the community is a serious wrong to the rights of the individual, upon which the rights of the community are based. We remember to have read a novel, by name *Robert Afterbury*, in which the hero, finding himself tainted with phthisis, desires to break his engagement with the woman he loves, since it would in his eyes be wrong for him either to procreate children or to rob his beloved of the joys and duties of maternity. She, however, discovers that there is insanity in her family, which fact renders it improper for her to procreate her kind, and the pair finally enter into a purely Platonic marriage, which is never physically consummated. She ultimately fills up the measure of her natural cravings by the adoption of an orphan child.

This is, however, a height of self-abnegation which it would be unreasonable to expect many people to attain, and we fear that there are few who, even if they entered upon a life union with such intentions, would be able to keep them.

The chief conditions which, according to Dr. Spinelli, render it for the woman's sake highly undesirable that she should marry, or rather become pregnant, are various cardiopathies, especially where they are associated with phenomena of asystole, however transitory; a phthisical predisposition which, according to Stoltz, may be changed by pregnancy into confirmed disease; persistent albuminuria and chronic nephritis, in which, even if the woman escapes death, the immediate puerperal danger is greatly increased by liability to eclampsia or pernicious anemia; diabetes; chronic anemia, which, under the influence of pregnancy, the author considers, frequently takes on a pernicious character; and a preexisting hereditary mental taint, which is often rendered active by pregnancy, his statistics showing a very grave prognosis in such cases.

From a social point of view the reproduction of degenerates is also a grave question, to say nothing of the social side of procreation by syphilis, tuberculous subjects, epileptics, and neuropathies or those with a mental taint, hereditary or acquired.

To all of these, if any other means of avoiding the dangers, personal or ethnical, can be found, the prohibition of a love union is a harsh and unjustifiable measure, and he says: "It may therefore be affirmed that in cardiopathies, in tuberculous subjects, in albuminuria, chronic nephritis, diabetes, grave anemia, mental maladies, preexistent or developing in the first pregnancy, it is necessary to prevent conception by all the methods"

The process he recommends is a surgical measure and consists in interrupting the utero-ovarian way so as to prevent the spermatozooids from reaching the ovule. Oophorectomy has proved to be often injurious to the entire organism. So-called Malthusian methods often fail; frequently they are merely conducive to immorality, and very often, he holds, they constitute a serious danger to the health of both parties.

The author therefore recommends two methods for the sterilization of women, both of them tolerably easy of execution, and practically devoid of any serious danger. His first method is to open the peritoneal cavity from the posterior vaginal fornix by drawing the uterus downward and forward and making a transverse incision between the utero-sacral ligaments. The tubes are then sought for with the fingers, drawn through the wound, and ligated, unless one or both of the annexa are diseased, in which case they are removed and the suture closed. The operation is slight and the patient able to leave her bed in about twelve days. The second operation consists in opening the anterior fornix between the bladder and uterus; dissecting the bladder away and drawing the fundus uteri through the wound. The tubes are then ligated in two places and divided between the ligatures unless disease renders it necessary to remove one or both of them.

The author has twice practised the latter operation, in the first case in an albuminuric. In this case he ligatured the right tube, and removed the appendages on the left side in consequence of disease. In the second case the patient was cardiopathic with mitral lesion. In neither case was any difficulty encountered, and the result has been permanently satisfactory. At the congress at Turin the author reported an operation by the first method for an uncompensated cardiac trouble with equally excellent results.

Professor Spinelli concludes by saying that while his procedure may have to undergo modification, so far as attaining the best method of securing interruption of the ovario-uterine passage is concerned, it must be admitted that this operative procedure is both easy of execution and does not entail any special danger.

While it is far from our desire to counsel any increase of superabundant surgical enthusiasm, and while we distinctly deprecate any unnecessary "unsexing" of women, we can not but feel that there are numberless instances in which a safe and easy method of rendering women sterile when pregnancy would be a source of more than ordinary danger to the individual, or a direct wrong to the community, is far better than a harsh prohibition of that union without which, when rightly entered upon, the highest aim and incentive of life is in-

complete, and in many cases life itself becomes a burden and a despair.

MINOR PARAGRAPHS.

ACCIDENTAL RUPTURE OF THE SYMPHYSIS PUBIS DURING LABOR.

In the January number of the *Memphis Medical Monthly*, under the heading of An Involuntary Symphysiotomy, Dr. B. F. Turner records a case of *aquabiler justo-minor pelvis* in which traction with the forceps applied at the superior strait resulted in separation of the pubic bones to the distance of about two inches and a half, with a rent of the soft parts extending from the anterior commissure of the vulva into the bladder. This injury was repaired by operation, and, although bony union never took place, the woman was ultimately able to do her household duties without difficulty. Three years after her first confinement, in which a dead child was extracted, she was easily delivered of a living child with the forceps. The pubic bones remain about half an inch apart, and Dr. Turner says: "To-day she runs about as nimbly as any woman, and is, so far as concerns her fitness for childbearing, a better woman than she ever was before."

EXTIRPATION OF THE STOMACH.

M. J.-H. FAURE (*Presse médicale*, December 31st) recently presented to the Paris Surgical Society a woman on whom he had performed, on November 19th, almost total extirpation of the stomach for a neoplasm. After removing the greater part of the stomach he had closed separately the duodenum and the stump of the stomach, and completed the operation by a posterior transmesocolic gastro-enterostomy. The author employed, or attempted to employ, the *écraseur* on the intestinal tunics, which procedure had been lauded by M. Doyen, but he describes the method after trial as detestable. On future occasions he will simply obliterate the lumen of the intestine by means of strong silk sutures drawn tight.

CONGENITAL CHLOROSIS.

JAWORSKI (*Wiener medicinische Presse*, 1897, No. 32; *Centralblatt für Gynäkologie*, January 14th) reports the case of a teacher, twenty-five years old, who at the age of nineteen began to suffer with menorrhagia, emaciation, pallor, loss of appetite, etc. She kept on at her work, however, and did not follow her physician's advice. She finally sought admission into a hospital, but not until she was suffering from such a severe flow that tamponing did not serve to check it, and she soon died. The author is inclined to look upon the case as one of congenital chlorosis of which the profuse menstruation was symptomatic. It is stated, however, that the patient began to menstruate at the age of fourteen, and that menstruation was normal until she was nineteen.

POWDERED TIN AS A REMEDY FOR TAPEWORM.

DOMMES, of Bückeburg (*Allgemeine medicinische Central-Zeitung*; *Wiener medicinische Blätter*, December 29th), seeks to revive the use of tin as a remedy in cases of tapeworm. The metal, he says, should be used in the form of the fine powder obtained by the employ-

ment of galvanism. It is entirely tasteless and does not give rise to toxic phenomena, as male fern, pomegranate, and various other tannicacids sometimes do.

THE CONNECTICUT STATE CAMP.

WE infer from an editorial article in the January number of the *Yale Medical Journal* that the drinking water used in the camp at Xiantic comes from wells situated on the premises, in soil that is probably permeated by refuse matter. Our contemporary rightly maintains that the State ought to supply the camp with water flowing through pipes from some safe source, and not trust to self-purification of the soil in the intervals of the camp's occupation, protracted though they may be.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending January 21, 1899:

DISEASES.	Week ending Jan. 14		Week ending Jan. 21.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	17	3	14	4
Scarlet fever.....	161	12	162	17
Cerebro-spinal meningitis.....	0	4	0	5
Measles.....	170	7	159	10
Diphtheria.....	192	30	180	26
Croup.....	21	7	12	9
Tuberculosis.....	203	147	189	176
Small pox.....	0	1	0	0
Chicken-pox.....	45	0	25	0

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Tuesday evening, the 24th inst., Dr. A. M. Phelps was to read a paper on Lateral Curvature of the Spine and Pott's Disease.

The Chicago Society of Internal Medicine.—At the joint meeting of the Chicago Medical Society and the Chicago Society of Internal Medicine, on Wednesday evening, the 25th inst., the following papers were to be presented: Acute Articular Rheumatism, by Dr. Henry M. Lyman; The Causation and Symptomatology of Acute Articular Rheumatism, by Dr. Arthur R. Edwards; and Chemical Theories of the Causation of Acute Articular Rheumatism, by J. H. Salisbury.

St. Mary's Hospital, Hoboken.—At the annual meeting of the staff, held on January 16th, officers for the ensuing year were elected as follows: President, Dr. Romeo F. Chabert; secretary, Dr. Charles A. Gilchrist.

The New York Foundling Hospital.—At the last meeting of the medical board the following new members were elected to the board: Attending obstetrician and gynecologist, Dr. John A. Pell; attending physicians, to succeed the late Dr. J. Lewis Smith and the late Dr. Joseph O'Dwyer, Dr. L. Emmett Holt and Dr. Rowland G. Freeman.

Changes of Address.—Dr. Elon N. Carpenter, to No. 110 West Fifty-seventh Street; Dr. F. M. Townsend, to No. 45 West Thirty-second Street; Dr. R. J. Wilson, to No. 279 West Seventy-first Street; Dr. Rudolph Jankowsky, from Crete, Nebraska, to Cedar Rapids, Iowa.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 11 to January 18, 1899:*

ANDREWS, CHARLES H., Acting Assistant Surgeon, is relieved from further duty at Huntsville, Alabama, and will proceed to San Francisco and report to the commanding general to accompany troops on the first transport sailing for Manila.

FOWLER, GEORGE R., Major and Chief Surgeon, is honorably discharged from the military service of the United States.

GORGAS, WILLIAM C., Major and Surgeon, will report to LUBLOW, WILLIAM, Major-General, commanding the Department of Havana, as chief surgeon of that department.

MOSELEY, EDWARD B., Major and Surgeon, and WARE, ISAAC P., Captain and Assistant Surgeon, are detailed as members of the board appointed to meet at the Presidio, San Francisco, for the examination of such officers as may be ordered before it for promotion.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 21, 1899:*

BARBER, G. H., Passed Assistant Surgeon. Detached from the *Glaucier* and ordered to the Naval Academy.

BYRNES, J. C., Surgeon. Ordered to additional duty on board the *Puritan*.

BLACKWELL, E. M., Assistant Surgeon. Detached from the *Vixen* and ordered to the *Franklin*.

GARTON, W. M., Assistant Surgeon. Detached from the *Supply* and ordered to the Washington Navy Yard.

GRIFFITH, S. H., Surgeon. Detached from the *Mayflower* and ordered home to await orders.

HOLCOMB, R. C., Assistant Surgeon. Detached from the Naval Academy and ordered to the Washington Navy Yard.

STOKES, C. F., Passed Assistant Surgeon. Ordered to the Naval Hospital, New York.

WAGGENER, J. R., Surgeon. Orders of January 3d, detaching him from the Mare Island Navy Yard and ordering him to Washington, are amended: ordered to be examined at Washington, and then to proceed home to await orders.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending January 19, 1899:*

BANKS, C. E., Surgeon. Detailed to attend meetings of the National Pure Food and Drug Congress at Washington, D. C., January 18 to 21, 1899. January 10, 1899.

KINVOIN, J. J., Passed Assistant Surgeon. Detailed to attend meetings of the National Pure Food and Drug Congress at Washington, D. C., January 18 to 21, 1899. January 10, 1899.

STIMPSON, W. G., Passed Assistant Surgeon. Granted leave of absence for two days. January 12, 1899.

THOMAS, A. R., Assistant Surgeon. Upon being relieved from duty of United States transport *Osage*,

to proceed to Stapleton, Staten Island, N. Y., for duty and as a recruit to quarters. January 6, 1899.

GREEN, J. B., Assistant Surgeon. Detached from duty on United States revenue steamer *Macdonough* and directed to report to medical officer in command,

San Francisco Quarantine, Angel Island, California, for temporary duty. January 12, 1899.

GRUBBS, S. B., Assistant Surgeon. To report at Washington, D. C., for special temporary duty. January 12, 1899.

RODMAN, J. C., Sanitary Inspector. Granted leave of absence for thirty days from January 12, 1899. January 12, 1899.

MCGUIRE, E. S., Hospital Steward. Granted leave of absence for thirty days from February 4, 1899. January 12, 1899.

GOODMAN, F. S., Hospital Steward. Relieved from duty at the Cape Charles Quarantine Station and directed to proceed to Philadelphia, Pennsylvania, and report to AUSTIN, H. W., Surgeon, for duty and assignment to quarters on the barge *Protector*, en route to Havana, Cuba. January 6, 1899.

CARLTON, C. G., Hospital Steward. To proceed to Chicago, Illinois, and report to the medical officer in command of the service for duty and assignment to quarters. January 6, 1899.

SOUTHARD, FRANK A., Hospital Steward. To proceed to Stapleton, Staten Island, N. Y., and report to the medical officer in command of the service for duty and assignment to quarters. January 7, 1899.

PURIFOY, JOHN, JR., Hospital Steward. To proceed to New Orleans, Louisiana, and report to the medical officer in command of the service for duty and assignment to quarters. January 7, 1899.

WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Clinton, Ga., for special temporary duty. January 13, 1899.

GARDNER, C. H., Passed Assistant Surgeon. To report at bureau for special temporary duty. January 14, 1899.

Board Convened.

Board convened to meet at the United States Marine Hospital at Chicago, Ill., on Tuesday, February 14, 1899, at ten o'clock A. M., for the examination of candidates for appointment as assistant surgeon in the service. Detail for board: Surgeon HENRY W. SAWTILLE, chairman; Surgeon CHARLES E. BANKS; Passed Assistant Surgeon J. O. COBB, recorder.

Appointments.

GREGORY, GEORGE A., of Maine, to be Acting Assistant Surgeon at Boothbay Harbor, Me. January 11, 1899.

Society Meetings for the Coming Week:

TUESDAY, January 31st: Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, February 1st: New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, February 2d: New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni of St. Louis; Atlanta Society of Medicine.

FRIDAY, February 3d: Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, February 4th: Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Births, Marriages, and Deaths.

Married.

BENNEY—TITUS.—In Brooklyn, on Wednesday, January 18th, Dr. Walter Benney and Miss Alice Livingston Titus.

HOLLISTER—SHELTON.—In New York, on Wednesday, January 18th, Dr. Frederick Kellogg Hollister and Miss Harriet M. Shelton, daughter of Dr. George G. Shelton.

MACADAM—VAN TINE.—In New York, on Thursday, January 19th, Dr. Henry Graham MacAdam and Miss Irene Van Tine.

Died.

CHASTANT.—In New Orleans, on Thursday, January 19th, Dr. Alcee Chastant, in the seventieth year of his age.

HARTMANN.—In St. Louis, on Tuesday, January 10th, Dr. Alexis K. Hartmann, in the sixtieth year of his age.

LYNCH.—In Boston, on Saturday, January 14th, Dr. Samuel Bartlett Lynch, in the thirty-ninth year of his age.

MCGILLICUDDY.—In New York, on Tuesday, January 17th, Dr. Timothy J. McGillicuddy, in the forty-third year of his age.

PEABODY.—In Henniker, New Hampshire, on Tuesday, January 17th, Dr. Leonard Wood Peabody, in the eighty-second year of his age.

READ.—In Tuscaloosa, Alabama, on Friday, January 20th, Dr. John B. Read, in the eightieth year of his age.

WOOD.—In Portland, Maine, on Sunday, January 22d, Dr. William R. Wood, aged eighty-nine years.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

III.

THE RIGHT TO PRACTISE MEDICINE AND SURGERY.

(Continued from page 98.)

Judicial Construction of Statutes.—The statutory enactments of the various States have from time to time been construed by the courts of the respective States or of the United States; but these decisions, being usually based upon the particular wording or meaning of the statute in question, are ordinarily of little interest outside of the State in which they are rendered. Some of these decisions, however, either involve a principle of extended application or construe statutes which exist so

generally as to render them of sufficient value to justify an examination.

Constitutional Validity of Medical Acts.—The constitutional validity of the laws prescribing requirements for those practising medicine and surgery has been attacked in nearly every State in the Union upon the general grounds that:

They invade natural rights.

They interfere with vested rights.

They discriminate against persons engaged in the same business or profession, and deny them the equal protection of the law.

Or, they are *ex post facto*.

Our courts, both State and Federal, have, however, almost universally upheld the constitutionality of these acts, conceding them to be invalid only where they contained some specially objectionable feature.

The authority of the legislature to enact a law of the character of those under consideration is included in the police power of the State. The police power is very broad; it has been judicially defined to be that inherent and plenary power in the State which enables it to prohibit all things hurtful to the comfort and welfare of society. It extends to the protection of the lives, limbs, health, comfort, and convenience as well as the property of all persons within the State, and to accomplish this end persons and property are subjected to all kinds of restraints and burdens.*

That the practice of medicine and surgery is a vocation that very nearly concerns the comfort, health, and even life of nearly every person can not be questioned, and therefore a wholesome restraint upon those unprepared to exercise these important functions is clearly the right of the State and its duty as well.

Nearly every State makes special provisions for licensing those who had been engaged in the practice of medicine and surgery in that State for a certain length of time prior to the enactment of the law. The validity of such provisions is attacked on the ground that they create special privileges and allow those who have exercised the right for the prescribed time to continue its exercise without submitting to examination or presenting a diploma; while all who have not practised for such period are obliged to be specially examined as to their qualifications or present diplomas, or both. The answer to this attack is, that if in the wisdom of the legislature the experience gained in practising five or ten years, or any other period fixed upon, within the State is equivalent by way of preparation to the course prescribed for those about to undertake the practice of medicine and surgery, it shall be lawful and will be considered no discrimination to fix these two standards.

It has been observed heretofore that many States extend to non-resident physicians and surgeons the right of being called into the State in consultation, and sometimes the right to extend their practice into the State without being examined or licensed. This has also been attacked as being an unjust discrimination and contrary to the fourteenth amendment of the Federal Constitution. It will be found that such laws do not permit such non-resident physicians to have an office or place for meeting patients within the State, and that they usually impose further restrictions. It therefore can not be said that such non-resident physicians enjoy the same privileges and immunities as a duly licensed resident practitioner.

tioner, and the law is therefore not subject to the objection urged. An Ohio court has upheld the constitutionality of the act, but based its reason for so doing on other grounds. In considering the question, the court said: "We discover nothing unreasonable in the regulations adopted by the statute in question for the admission of persons to the practice of medicine, nor any valid objection to the provision excepting therefrom physicians residents of other States. Physicians called in consultation are usually the most eminent and skillful that can be procured; and those residing on the border of an adjoining State, with a practice extending into this State, can include only those who have a legal standing and established practice in their own State, and which the law regards a sufficient evidence of their capacity and character to admit them to continue their practice here."*

Constitutional Objections to Particular Acts.—Certain features of those acts have at times been found to be objectionable; as, for instance, a law which allowed certain privileges to a particular school of medicine, or which imposed certain burdens upon another school, would be unconstitutional.† A law punishing a duly qualified physician for what is styled "unprofessional conduct" in advertising himself as a specialist in certain diseases would be unconstitutional; for, while such conduct might be contrary to professional ethics, it would in no way be injurious to the public morals or a menace to the general welfare.‡ And so a law requiring all who had not practised four years in one place to procure and pay for a license, but exempted those who had practised for this period from such expense, would be unconstitutional because of the burden imposed upon one class and not upon all.§

But against the main body of the statute law upon the subject, as it stands in the several States, there seems to be no valid constitutional objection which can be urged.

Doctor, Physician, and Surgeon Defined.—"The meaning of the term doctor, or physician and surgeon, as used in the law, is not confined to any particular school or schools, but is considered in the broad sense of one who professes the art of healing. Justice Daly, in a well-considered case, said: "The legal significance of the term doctor is simply a practitioner of physic. The system pursued by the practitioner is immaterial. The law has nothing to do with the merits of particular systems. Their relative merits must become the subject of inquiry when the skill or ability of a practitioner in any given case is to be passed upon as a matter of fact."¶

The supreme court of Wisconsin, thirty years later, following the reasoning of this decision, held that a statute providing for the organization of a county medical society included as well the organization of homoeopaths as of any other school.‡

The question of whether one who "practises bone-setting and reducing sprains, swellings, and contractions of the sinews, by friction and fomentation," is a practitioner of medicine and surgery, was considered in the supreme court of Massachusetts in 1835.§ While such

* *France vs. State*, 37 O. St., 1, 12 N. E. Rep., 1941.

† *McClellan vs. State*, 36 Neb., 241, 24 N. W. Rep. 519.

‡ *Leggett vs. McNeil*, 77 Cal., 164.

§ *Constitution vs. Pennoyer*, 65 N. H., 11, 18 Atl. Rep., 878.

¶ *Constitution vs. Maritzek*, 1 E. D. Smith, 1.

‡ *Raynor vs. State*, 62 Wis., 589.

§ *Hewitt vs. Chamber*, 16 Pick., 5.

* *Lakeside vs. Rose Hill Cemetery*, 70 Ill., 191. *State vs. Noves*, 4, Me., 189.

a practice does not amount to a general exercise of the functions of the science of either medicine or surgery, it forms an important part of the practice of surgery, and renders the practitioner amenable to the laws affecting the physician and surgeon; also one who gave electric treatment was held to be engaged in the practice of medicine and surgery. The court said: "It is quite unnecessary, we think, that, in order to practise medicine within the meaning of the statute, the practitioner should give internal remedies."* The services of a clairvoyant are within the meaning of the term "medical or surgical services."†

The law of Illinois, in force in 1887, provided that "no person shall practise medicine in any of its departments in this State without the qualifications required by this act." The question arose whether or not this included midwifery. The court was of the opinion that obstetrics was an important department of medicine, and that it was included within the terms of the statute.‡

Moreover, the supreme court of Nebraska, in a well-considered opinion rendered in 1894, held that a Christian Scientist, in the exercise of his practice, came within the statute which provides that any person shall be considered as practising medicine "who shall operate on, profess to heal, or prescribe for, or otherwise treat any physical or mental ailment of another."§

In a more recent case, arising in Rhode Island, the court held that the term "practice of medicine," as used in their statutes, must be understood in the ordinary or popular sense of determining the physical condition of the patient and treating his disease or injury by the ordinary or material remedies, and that it could not be so construed as to include in its meaning the treatment of the Christian Scientist, which takes account neither of physical symptoms and conditions of the patient nor of the application of remedial substances.||

While several of these decisions were based upon the wording of particular statutes, it may be laid down as a general rule that the term doctor, physician, and surgeon, or practitioner of medicine and surgery, as legally used, is broad enough to include all those who profess and practise the art of healing in its several branches.

Decision of Examining Board, when Conclusive.—The authority conferred upon the examining board is usually both ministerial and judicial in its character; by the law of most States the decisions of the board in refusing or in revoking licenses to practise are made subject to review on appeal to the circuit or district court. The law usually provides the manner of taking this appeal, but is sometimes silent upon the subject; this failure, however, to provide for the manner of appealing does not affect the right to appeal. Whenever the law provides that the proceedings of the board may be reviewed upon appeal, it will be necessary for the party who is not satisfied with their decision to bring the matter before the court in the manner provided by the statute;¶ but when the statute makes no provision whatever for an appeal from the decision of the board, his remedy is by

mandamus. A writ of *mandamus* is a command issuing from a court of law in the name of the State directed to some inferior court, officer, or person, requiring him or them to do some particular thing therein specified. In theory, a writ of *mandamus* will issue only to compel the performance of a ministerial act, but will not review any judicial proceeding or interfere with the performance of a function requiring the exercise of judgment and discretion. Should, however, a board refuse to give a candidate a fair examination because of his views regarding any particular school of medicine, or should, when examined, refuse to pass him for a like reason, or refuse to accept his diploma for a similar reason, then *mandamus* would lie; but if, after giving him a fair examination, they determine that his knowledge of medicine is not sufficient to entitle him to practise, or if, after hearing evidence against a legally qualified practitioner in the manner provided by law, they decide he has been guilty of an offense justifying the revocation of his certificate or license, such decisions are not subject to review under a writ of *mandamus*. In New Jersey the board has refused to register the applicant on the ground that his diploma was not issued by a reputable school or college of medicine and surgery. Under a writ of *mandamus* the court refused to consider the evidence as to whether the judgment of the board was correct, because the board had acted in a judicial capacity in arriving at this conclusion.*

In Missouri the supreme court, in considering practically the same facts, rendered the same decision; the judge, however, in delivering the opinion, said: "It is thought best to say this in conclusion, that, notwithstanding what has been said relative to the discretionary powers of the board of health, that [*sic*] according to the express terms of the provision in section 2, such discretionary power does not extend to discriminating against any particular school or system of medicine, and that, should such discrimination ever occur, the limits of discretionary power will have been passed."†

Summing up, it may be stated generally that the action of the examining board is not final. If the statute gives the right of appeal, the court having jurisdiction will review the proceedings of the board, and by its judgment rectify errors, should any be found. And the right to review the grounds of refusal on appeal is not confined to cases of refusal for unprofessional and dishonorable conduct, but, where the statute provides for appeal in "all cases of the refusal of a certificate," the court may examine, or direct the examination, of a candidate as to his competency.‡ Where no right of appeal is given by statute, a writ of *mandamus* will lie to compel the board to do those things which the law makes it their duty to do, and even to rectify a manifest injustice resulting from an abuse of their discretionary powers.§

Illustrations.—It will be observed from the foregoing that it is the purpose of the law to guard against arbitrary and unjust or unfair conduct on the part of the examining board. A case once arose in New Hampshire which very aptly illustrates this. A candidate applied to the board for a license to practise medicine, surgery, and

* *Davidson vs. Boldman*, 37 Mo. App., 576.

† *Bibber vs. Simpson*, 59 Mo., 181.

‡ *People vs. Arendt*, 60 Ill. App., 89.

§ *State vs. Be-well*, 19 Neb., 158; 58 N. W. Rep., 728.

|| *State vs. Myhal (R. L.)*, 10 Atl. Rep., 753.

¶ *State, Norcross vs. Board of Medical Examiners*, 25 Pac. Rep., 449; 19 Mont., 162.

* *State ex rel. Kirchgessner vs. Board of Health, etc.*, 22 Atl. Rep., 226.

† *State ex rel. Granville vs. Gregory*, 83 Mo., 123.

‡ *State vs. District Court of First Judicial District*, 18 Pac. R., 1104 (Mont.).

§ *Illinois State Board of Dental Examiners vs. People*, 123 Ill., 227; 13 N. E. Rep., 201.

midwifery; he produced a diploma which fulfilled the requirements of the law, but the board refused to grant the license on the ground that he was not worthy of public confidence. The board has the power under the law of New Hampshire, "upon due notice and hearing, to revoke any license granted by it, when improperly obtained, or when the holder has, by conviction of crime or for other cause, ceased to be worthy of public confidence." The court held that the board had no right to refuse the applicant a license solely upon the ground that he was "not worthy of public confidence," without first giving him due notice and a fair hearing. If then facts were fairly proved by evidence adduced showing him to be unworthy of public confidence, the license would be properly refused.*

And so, when the board established a rule that every medical college should by a certain date furnish the board with a list of its matriculates and the basis of their matriculation, and in the event that any college failed to comply with this request it should not be considered "in good standing," the court held that this rule could not be enforced against an applicant who had graduated from a college in good standing which had not complied with the rule, if it was shown that the college had no notice of the rule until after the date fixed.†

(To be continued.)

Letters to the Editor.

THE GENELLA FORCEPS.

NEW ORLEANS, January 15, 1899.

To the Editor of the *New York Medical Journal*:

SIR: Referring to the letter published by Dr. Ernest Laplace in your issue of January 14th, I have the honor to agree with him in his statement that his forceps is not a modification of Dr. Murphy's. The only answer necessary to the rest of his letter is that my article has been in the possession of the *New York Medical Journal* since July 29th, and consequently had been written some months previous; therefore I could not have taken any of my information from any source published since that date.

If the Genella forceps has anything about it that unfits it for the operation it was intended for, I have not yet found it out, although I have studied the subject very carefully. LOUIS J. GENELLA, M. D.

THE NEW YORK BOARD OF HEALTH'S SERUM BUSINESS.

187 SECOND AVENUE, NEW YORK, January 17, 1899.

To the Editor of the *New York Medical Journal*:

SIR: I mark with interest the letter from Dr. George W. Cox, of Chicago, on the specification of the New York municipal antistreptococci serum in the report of the American Gynecological Society, published in your issue of January 14th.

Dr. Cox in his valuable letter comments on the difficulty of understanding why this discrimination against other makers should have been made by the society's reporters, and cites the undisputed fact that high medi-

cal authority has already scored the New York board of health and its bacteriological laboratory for engaging in a commercial venture which does not come within its proper province.

Not only is every word of this true as regards the particular serum which elicited this expression of opinion, but it is true in other directions as well. Much might be argued against the conduct of the bacteriological laboratory on the score of false and perverted municipal economy in thus engaging in competition with commercial interests, a competition which in the very essence of existing social conditions must be destructive. Postponing that branch of the discussion, I wish to call attention to a minor detail barely touched on by Dr. Cox.

Your learned correspondent from Chicago writes: "The serum's reputation as a 'standard' product depends very largely upon what the New York board of health says about it." The same is true of all the board's serum products. It alleges high potency for all its serums, but the claim is supported by no authority higher than its own test of that which it has made. A commercial manufacturer must get a report of his serum product from some independent authority, who is not himself a competing manufacturer, before he can gain professional attention. The municipal body may say what it pleases about the wares it has for sale, and put its advertising matter forward as scientific pronouncement of attested worth. If this is as stated by Dr. Cox there must be some misconception somewhere. When, in January last, the State board of health appointed Dr. Dillon Brown and Dr. W. H. M. May a committee to fix upon a method of testing serums which might be offered for use in practice in this State, Dr. George E. Fowler communicated the information to the commercial manufacturers of serums. With commendable unanimity the commercial laboratories agreed to submit their products to independent competitive test without hesitation. The reason why the project fell through is said by bacteriologists to be that the board of health stated that, so long as the methods of test were as uncertain as they then were, no good results could be reached.

There can be no objection to the manufacture of serum by the bacteriological laboratory of the New York city board of health for purposes of bringing relief to the sick poor. That seems legitimate on the part of the city, and a free interpretation would be allowed as to what should constitute a gratuitous system under the cloak of charity. But when the city goes beyond this generously established limit and enters the market as a competing manufacturer and vendor of its product it may well be that opposition should be developed which might confound that which is legitimately a municipal charity with that which is purely commercial. It is suggested that the city can not be too careful to keep the two functions rigidly distinct. If they had been successful hitherto in so doing they would not have encountered such criticism as that in the letter which has served as a text for this communication.

LOUIS FISCHER, M. D.

PER OS AND "PER ORIM"

Boston, January 18, 1899.

To the Editor of the *New York Medical Journal*:

SIR: I have read with much interest your reply to a criticism, by one of your readers, of your use of the

* *Gage vs. Conners*, 63 N. H., 92.

† *State ex rel Johnson vs. Lutz*, 136 Mo., 633, 38 S. W. Rep., 471.

word *os* in the phrase "*per os*," instead of "*per orem*," as meaning "by the mouth," in which you claim that your version is the correct one. I am somewhat impatient at his delay in replying to your criticism, and venture to call your attention to a good Latin authority, *Harper's Latin-English Lexicon*, published in your good city. If you turn to the word "*os*" you will read as follows: 1. "*Os, oris*, the mouth." After a series of etymological paragraphs, if you turn the leaf you will find: 2. *Os, ossis*, a bone, plural *ossa*. So there are two Latin words *os*; and when you write the phrase *per os*, as signifying by mouth, you use the accusative singular of the second *os*, and the meaning would be "by the bone."

I regret to see how general the use of *per os* is getting to be in the medical journals south and west of New England. I have a very vivid recollection of the two words *os*, and the distinction between them, since my schoolboy days.

Boston.

P. S.—I have never yet met the phrase "*per os*" in any of the English, Scotch, or Irish medical journals which I read.

* * We have held back "Boston's" letter from the printer for several days, in the hope that he might fall in with some schoolmaster—one qualified to teach Latin "south and west of New England" would do—and would in consequence send us a request to suppress his communication. But he seems to persist in the error of his ways. We have, indeed, received a second letter from him, but it only goes to enforce his contention that there are two Latin words *os*. As that fact has been known "south and west of New England," to say nothing of the rest of the world, from the remotest scholastic period, there is no good reason for our printing "Boston's" second letter. What he says is not to the point, and "*per orem*" is nonsense. "Boston" admits that he is impatient. Now, impatience is not conducive to success in controversy. It leads one to overlook little things. We presume that in this instance it has led "Boston" to overlook the fact that both the words *os* are neuter, and therefore in both instances the accusative is the same as the nominative.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of November 2, 1898.

The President, Dr. S. ALEXANDER, in the Chair.

Report of a Case of Stillbirth due to Syphilis, in which Both Parents contracted the Disease after Conception.—Dr. WINFIELD AYRES presented this report. He said that many cases had been recorded of syphilitic children having been born to a mother who had contracted the disease after conception. Chancre, developing in the mother at any period between the time of conception and the eighth month, might be followed by a syphilitic child, but he had not been able to find the record of a case of stillbirth with the history that both parents had contracted syphilis after conception. In the case to be reported the father had developed chancre two months, and the mother four months, after impregnation.

The history of the case was as follows: On July 14, 1897, Mr. F. had called him to see his wife. Both he and she were suffering from syphilis. He had developed a chancre seven, and she five, months previously. The wife was suffering from mucous patches in the mouth and throat, with afternoon headaches and pains in the tibiae. Mr. F. said that after he had been treated for his chancre three weeks his doctor had told him that he could safely have connection with his wife, though the sore had not completely healed. His wife had developed a chancre just four weeks after this connection.

When the speaker had first seen her she was at full term. She had been taking medicine for about two months without obtaining any relief from her symptoms. The fœtus was apparently healthy, as vigorous movements could be felt, and the fetal heart could be distinctly heard. She was given a thirty-second of a grain of the biniodide of mercury, and five grains of the iodide of potassium, three times daily, and her husband was ordered to take of the same drugs a twelfth of a grain and ten grains respectively. By mistake, the wife took a tablespoonful of her husband's medicine three times a day for three days, or, at each dose, a third of a grain of the biniodide and sixty grains of the iodide of potassium. She became intensely salivated; the gums and tongue swelled badly, and she suffered from severe pains in the lower jaw. Simultaneously with the pain in the jaw she ceased to feel any movement of the child. Her labor pains began on the 23d, at 8 p. m., and continued with moderate severity until 11 a. m. of the following day, when he was called. The *os* dilated to the size of the proverbial silver dollar, and the child was born two hours and a half later, the labor being perfectly normal. The child was macerated, and had the appearance of having been dead for several days. There were no marks of syphilis about it. There was no probability of a previous syphilis in either of the parents, as there were no marks of the disease on them, and they had had four perfectly healthy children. Both also denied a previous syphilis.

Dr. Ayres said that the question might be raised: Was not mercury, rather than syphilis, the cause of the stillbirth? In his opinion it was simply a coincidence. The fact that the child had no indication of syphilis about it proved nothing conclusively, because many children were born looking perfectly healthy, in whom hereditary syphilis developed later; moreover, in most stillbirths due to syphilis the fœtus died, as this one did, during the last few days of gestation. Mrs. F. gave birth to a syphilitic child on September 5, 1898. She had been under constant antisyphilitic treatment since the stillbirth, and had shown no signs of the disease.

Report of an Encapsulated Stone in the Prostate, with the Presentation of Specimen.—Dr. AYRES also made this report. He said that encapsulated stone of the bladder was not so very uncommon, but the method for removing the calculus employed in this case seemed to him unique. The history of the case was as follows: F. C., aged twenty-seven years, a physician by occupation, came to see him last June. Five years ago he had had a severe attack of pain in the right inguinal and lumbar region, with pain in the testicle, lasting two or three hours. Three years ago he had had several similar attacks which he had attributed to renal colic. After these, he thought he had passed several stones, because he had heard sounds, as of small, hard substances, striking against the sides of a tin pail which

he was using for a urinal, but he had not examined the contents to see if he was correct. One year ago he had had an attack of pain over "McBurney's point": the appendix had been removed and found to be catarrhal. After the operation he had been relieved of pain. He had had painful urination for the last two or three years. At times the stream would stop suddenly before the bladder was emptied, while at other times it would be perfectly free. He had passed some blood-corpuses, but no blood clots. On coming under observation there had been great difficulty in urinating for about six weeks previously. The stream was very small. The act of urination usually required about five minutes, and was accompanied by severe pain in the head of the penis and testicle, and sometimes by shooting pains in the leg. The urine, for the most part, was clear, though occasionally it contained a mucous cloud, with a few pus and blood cells. He had examined him for stone thoroughly, but had failed to find one; yet as the searcher passed through the prostate there had been just one rub, as though it were passing over an imbedded stone. Rectal examination had revealed a small, hard mass in the left lobe of the prostate, apparently situated more in the superior than in the inferior portion. It could not be dislodged. When seen again, three days later, his symptoms had been very much aggravated, but still the mass could not be dislodged. When next seen, seven days later, he said that he had been much more comfortable until the preceding day, when he had had to urinate every fifteen minutes. The stream was small and urination caused great pain. On again manipulating the prostate, it was found that there was considerable softening on the left side, around the original point of hardness. After the manipulation he urinated, and, with the first gush of water (which had been hard to start), he passed the stone. There was also considerable pus in the urine. He had had no return of his symptoms since the stone was passed.

From the fact that no stone could be detected in the bladder by the searcher, and that the hardness felt through the rectum was always in the left lobe of the prostate, the diagnosis of encapsulated stone of the prostate was unquestionable. The capsule was in such a position as to obstruct the outward flow of urine, though it allowed a large catheter to pass readily.

The patient had been repeatedly examined for stone by prominent surgeons, all of whom had failed to find one. One surgeon had also obtained a slight rub, but, failing to repeat it, he concluded that there was no stone.

Dr. Ayres said that he believed he had set up an inflammation of the capsule of the stone by his repeated manipulations, and had at last ruptured the capsule, which had been weakened by the inflammation, thus freeing the stone. The size of the calculus was six by eight by thirteen millimetres, and it was twenty three millimetres in circumference in its smallest diameter. The stone was passed with very little difficulty, probably owing to the fact that the patient had frequently had large sounds passed upon him before this.

The case was apparently one of renal calculus, originally, the calculus having descended and become caught in the dilated prostatic urethra.

Prostatic Enlargement and Vesical Calculi; Suprapubic Cystotomy, and Prostatectomy by Alexander's Method.—Dr. PARKER SYMS reported the following case and exhibited the specimen:

A Hungarian shoemaker, sixty-six years of age, was

admitted to Lebanon Hospital July 15, 1897. He gave a history of having begun to have pain in the region of the bladder, with frequent and painful micturition, about nine months before he was admitted to the hospital. His symptoms had steadily increased in severity, and, at the time of admission, the patient was a good deal of a sufferer. He had the characteristic symptoms of obstruction to the urinary flow, and his urine showed some albumin. It was alkaline in reaction, and contained mucus and pus, but no casts were found, and no blood. The patient's general condition was very fair for one of that age. Examination showed a decided but not excessive enlargement of the prostate, especially marked in the left lateral lobe. Intravesical examination showed the presence of calculi. There was also residual urine amounting to over an ounce. On July 21st, under other narcosis, suprapubic cystotomy was done, and five calculi of irregular shape, and about half an inch in diameter, were removed.

Further exploration of the bladder and prostate at this time determined the operator to enucleate the prostate through the perineum at once. Accordingly, a perineal incision was made, the membranous urethra was opened according to Alexander's method, and, with two fingers of the left hand in the bladder, pushing down the prostate into the perineum, enucleation of the lateral lobes was accomplished with great ease. There was no marked middle lobe, but the lateral lobes were crowded quite close together, and decidedly encroached on the urethra. The entire operation, including the cleansing, etc., consumed fifty-five minutes. After the operation the bladder was drained both suprapubically and by a perineal tube. The treatment consisted in frequent washings and the ordinary care required for patients in this condition. The patient made a steady recovery, which was, however, somewhat delayed owing to the fact that slight suppuration occurred in the fascia around the suprapubic wound. This was not sufficient to cause severe constitutional symptoms, but retarded the healing. The perineal wound healed promptly after the tube had been removed. The suprapubic wound closed in about six weeks. When last observed, which was in October, 1897, or about nine weeks after the operation, the patient had complete control of his bladder, the cystitis had been practically cured, his urination was painless and normal as to frequency, and there was no residual urine.

Complete Ablation of the Breast for Carcinoma.—Dr. SYMS reported this case, and exhibited the patient to show the excellent functional condition of the arm. The patient, Ellen E., single, aged sixty years, had been admitted to the New York Cancer Hospital on February 7, 1898. She had begun to have pain in the right breast two years and a half before, and, after six months, had noticed a small lump in the lower part of the right breast. Since then she had had lancinating pains in the breast, and the lump had steadily increased in size. In June, 1897, this lump had softened and broken down, and ever since then there had been a free discharge. She was markedly cachectic, very much emaciated, and debilitated, owing to the constant discharge from the tumor of blood and detritus, and undoubtedly was suffering from a low grade of septicaemia. Her heart action and general condition were so poor that it was at first thought to be impossible for her to stand any prolonged operation, and that the disease was so far advanced that nothing but a palliative result could be expected from the ablation. However, ten days of active

treatment by tonics and forced feeding, with the patient resting in bed, greatly improved her condition, so that she appeared to be able to undergo an operation. The right breast was generally enlarged, and at its lower and outer part was a characteristic, sloughing carcinoma, having a very foul-smelling base. The operation was done on February 18th. The sloughing area of tumor was first thoroughly disinfected with Paquelin's cautery, then a wide incision was made, encircling the breast and extending up along the outer border of the pectoralis muscle toward the axilla, and a second incision was made from the outer half of clavicle, connecting with the first incision nearly at a right angle. The pectoralis major and minor muscles, the subclavicular fat and glands, the axillary fat and glands, and the breast with the tumor were removed in one mass. As the ablation was made from above downward, the vessels were cut but once, and the operation was, comparatively speaking, a bloodless one.

Undoubtedly, owing to the patient's enfeebled condition, the surface that necessarily had to be left to granulate healed rather slowly, but her general condition steadily improved, so that at the present writing she was in excellent health. She now had no evidence of a recurrence of the growth unless there were some under the scab covering the site of latest cicatrization. The function of the arm was particularly good. She could move it with strength in all normal directions, and without the slightest limitation or restriction.

Dr. ALEXANDER said that the case of prostatectomy was a favorable one for good results. He was pleased to learn that others were adopting his method. He had found that in thin subjects it was perfectly possible to perform enucleation without making a suprapubic opening at all, simply by pressing down behind the pubes.

Dr. A. B. JOHNSON said that one would suppose that these complete operations for carcinoma of the breast had obtained a sufficient reputation to make it the duty of every surgeon, called upon to operate upon such cases early, to do the most complete operation possible, yet it was only a few days ago that a prominent surgeon in this city had expressed the opinion that these extensive operations were needless and no more efficacious than simple excision of the tumor. The speaker said that this case, and many others that he had seen, seemed to prove beyond all peradventure that a large proportion of the patients, if operated upon in this way sufficiently early, were really cured. Any one familiar with the miseries consequent upon the incomplete operation would never wish to do it or see it done. He had recently operated upon a lady who had been subjected to five operations for recurrent carcinoma of the breast and cervical glands. If the glands were already involved, one must expect a recurrence. If this woman had been operated upon properly at first she would probably have been well to-day, because she had stood these numerous operations exceedingly well and had maintained a fair state of health. The original operation had merely removed the tumor.

Dr. SYMS explained that he did not present this patient as illustrating the best results of this operation. The disease had clearly existed over two years in her case, and consequently it was almost certain that there would be a recurrence. His object in presenting her was to show the excellent preservation of the function of the arm. This complete operation, being done almost entirely by blunt dissection, was almost bloodless; the important blood-vessels were secured before being cut,

and the effect on the patient was less severe than that of an incomplete operation. This woman had been able to pursue her occupation of washerwoman in spite of the extensive operation done.

Sarcoma of the Ovary with Ovariectomy, and Sarcoma of the Kidney with Nephrectomy, Both in the Same Case.—Dr. C. C. BARROWS reported this case. The patient, a woman of fifty-eight years, had come under his care early in April because of a tumor which she had discovered in the right iliac fossa. The operation showed the presence of a sarcoma of the ovary, and this was removed. She recovered promptly, but returned three months later with a tumor in the region of the kidney. Through the anterior incision this tumor was removed, and proved to be a sarcomatous kidney. He felt confident that this second growth had not existed at the time of the first examination. Both of the tumors had been examined by a pathologist, who reported them to be sarcoma.

A Vermiform Appendix containing a Minute Piece of Bone.—Dr. CHARLES PHELPS reported this case. He stated that the attack had begun eight days ago, but the patient had not come under his observation until three days ago, and had been operated upon to-day. A small abscess had been found and evacuated. A perfectly smooth mass, feeling like a kidney, had been brought into the wound, and had been found to contain the appendix. Within this appendix was a minute piece of bone. The irritation produced by this foreign body had resulted in the production of this mass of inflammatory exudate. Some surgeons, he said, maintained that they had never found a foreign body in their cases of appendicitis; he had found them quite frequently, but this was the most minute one that he had met with.

Dr. ROBERT T. MORRIS said that usually the things which were called grape seeds, etc., proved, on searching microscopical and chemical examination, to be ordinary concretions of insoluble salts, mixed, in most cases, with more or less fecal matter. For this reason one should be careful in determining this point. He had found a piece of apple core in one appendix, and it was the only foreign body that he had discovered in his cases. In one of Dr. Wyeth's cases he had seen some lemon seeds.

Memorial of the Late Dr. George McCreery, Major and Surgeon, United States Army.—Dr. N. S. JARVIS presented this memorial on behalf of the committee appointed for that purpose, and said that it was his sad duty to pay this last tribute to their late associate, Dr. George McCreery, Surgeon, United States Army, who died on August 26th, while *en route* to home and loved ones, having survived all the dangers of battle and all the horrors of pestilence at Santiago.

He regretted that more eloquent lips or skillful pen had not been selected to present this memorial, for his was an unusual instance of that fearless, self-sacrificing devotion to duty, that patient courage which marked the loyal physician, the brave soldier.

Dr. McCreery was born in New York in 1854, his early education having been acquired at St. John's College, Fordham, where he received the degree of A. B. in 1874, that of M. A. in 1876; his medical degree was obtained in 1877 from the Bellevue Hospital Medical College, and shortly afterward he entered the hospital as a junior on the Second Surgical Division. After the completion of his tour as house surgeon, he was commissioned in the United States Army as an assistant surgeon, passing through the various grades to his majority, which he reached a short time before his untimely death.

Dr. McCreery's military service was performed mostly on the Western frontier, his first assignment taking him to the Department of Arizona, in those days the most dangerous and exciting section of the far West. While post surgeon at Fort Apache in the White Mountains of Arizona he accompanied the command of General Eugene Carr into the heart of the hostile White Mountain Apache stronghold, then led by the notorious Pedro. The troops were attacked about forty miles from Fort Apache and were compelled to contest every step to the post. One of the troop commanders was killed, and many enlisted men were killed or wounded. The post itself was attacked, and the garrison, containing many women and children, were saved by the timely arrival of Carr's command. To pick up and succor wounded men in the face of constant fire from an enemy that acknowledged no obligation to the helpless called for no small amount of personal courage and coolness; but with the true instinct of the brave man and faithful physician Dr. McCreery unflinchingly performed his whole duty. General Carr, who commanded these troops, related to me the circumstances of this our associate's baptism of fire. Dr. McCreery was again under fire in a skirmish with these Indians two days later; he afterward performed extensive field service in the many expeditions in this and subsequent years, being transferred to Dakota in 1883.

At the outbreak of the present war, being assigned as surgeon to the Sixth United States Cavalry commanded by Colonel, now Major-General, Samuel Sumner, he accompanied the regiment from Tampa to Cuba, and was present in the attack on the Spanish defenses at San Juan hill, where he again evidenced that courage which had marked his entire army career. The demand for surgeons at the base became so great that Dr. McCreery was detached from the Sixth Cavalry and assigned to the division hospital, and finally placed in command of the yellow-fever hospital at Siboney. Here he fell a victim to that dread disease and, by a strange coincidence, was relieved by Dr. W. C. Gorgas, United States Army, who had been Dr. McCreery's junior assistant at Bellevue.

While convalescing from yellow fever, our associate was attacked by dysentery; in his exhausted state he left Santiago on a transport on August 15th, but gradually sank, and on the 26th of August, almost in sight of his home, quietly passed away.

As a physician, Dr. McCreery was skillful, thoughtful, and studious, and his many deeds of kindness and thoughtful consideration for the sick and suffering had endeared his memory to his comrades. As a man, he was punctilious, straightforward, and honorable in all things.

Surely, said the speaker, our venerable Bellevue had made many sacrifices to our national glory, our country's defense.

HEADQUARTERS, DEPARTMENT OF TEXAS,
SAN ANTONIO, TEXAS, April 11, 1899.

Brigadier-General Charles Sutherland, Surgeon-General, United States Army, Washington, D. C.

MY DEAR GENERAL: I see by Washington press dispatches, though nothing official has yet reached me, that Captain George McCreery of your department will soon leave Fort McIntosh, Texas, and be ordered to duty in the Department of the Platte at Fort Sully, Nebraska. I can not allow so accomplished a medical officer to leave the Department of Texas without a personal note to you my regret that we must lose his services, though

I feel that he is entitled, after a long tour at one of the most trying of our Rio Grande stations, to a change of climate.

I recently inspected Fort McIntosh, including its admirable hospital, and send you this unsolicited testimony to the exceptional efficiency and ability of Surgeon George McCreery, whose professional and social standing in this department has earned for him my highest respect and warm personal regard.

Yours faithfully,

[Signed.]

FRANK WHEATON,

Brigadier and Brevet Major-General, United States Army.

THE ARMY AND NAVY CLUB, FARRAGUT SQUARE,
WASHINGTON, D. C., February 19, 1895.

Brigadier-General O. B. Willcox, United States Army, Retired:

GENERAL: Referring to letter of Colonel H. C. Cordin, assistant adjutant-general, dated Headquarters of the Army, July 7, 1894, referring to my recommendation when colonel of the Sixth Cavalry, dated Fort Wingate, April 24, 1890, that First-Lieutenant George McCreery, assistant surgeon, be brevetted captain for gallant service in action against hostile Apache Indians at Cibien Creek, Arizona, August 31, 1881, and major, for gallant service in action against hostile Apache Indians in their attack upon Fort Apache, Arizona, September 1, 1881, and requesting you, if you so desire, to submit your recommendation as late department commander, with a specific recital of the details connected with an act or acts of gallantry on this officer's part during the engagements referred to; which paper you referred to me by indorsement dated January 21, 1895.

I have the honor to state, after refreshing my memory by inquiries from officers and others, as follows:

On the afternoon of August 30 (not 31st), 1881, in the action against hostile Apache Indians at Cibien Creek, Arizona, after Captain Hintig had fallen I requested First-Lieutenant and Assistant-Surgeon George McCreery to see him. He went without hesitation, although the enemy's bullets were raising puffs of dust about Hintig's body, and, after ascertaining that he was dead, he proceeded to gather up the wounded, particularly Private Bird, or Byrd, of Troop D, Sixth Cavalry, who had been wounded trying to save his captain, and who, with others, was lying where the bullets were striking.

On the morning of August 31, 1881, while on the march from Cibien to Fort Apache, Arizona, First-Lieutenant and Assistant-Surgeon George McCreery had charge of a desperately wounded soldier named Foran, of Troop D, Sixth Cavalry, who was shot through the bowels, and who, being carried along on a horse, had to be supported, but nevertheless frequently threw himself off during the night march from the pain. This caused Dr. McCreery and the two or three men with him to fall behind till they were over half an hour in rear of the column, and the danger was considered imminent; but Dr. McCreery remained with the patient till he died on the Maricopa range of mountains, when his body was tied across the horse and brought forward more rapidly.

These two acts of gallantry, or rather the first of gallantry and the latter of devotion, are of the nature of supported men in duress, and need no comment, in my opinion, on the doctor or the character of action and man.

I can not recall the details of acts of Lieutenant

McCreery during the attack on Fort Apache, which occurred September 1, 1881, except that he had charge of his hospital, which was on one of the exposed sides of the post; that his sick and attendants were armed, though some could not stand; that he was under fire, as all were; and that he behaved most gallantly.

Very respectfully,

E. A. CARR,

Brigadier-General, United States Army, Retired; Brevet Major-General, United States Army and United States Volunteers; Congressional Medalist; commanding at the times referred to.

On motion of Dr. PARKER SYMS, the report was received and ordered placed on the minutes of the society, and a copy sent to the family of the late Dr. McCreery.

(To be concluded.)

Book Notices.

Handbook for the Hospital Corps of the United States Army and State Military Forces. By CHARLES SMART, Deputy Surgeon-General, United States Army. New York: William Wood & Co., 1898. Pp. vii-350.

THE original handbook which Dr. Smart prepared for the instruction of the hospital corps of the United States army, when that body was organized by the government, proved itself a manual of much usefulness. It was but natural, therefore, that a revised edition should be demanded on the outbreak of the recent war with Spain, to the end that those who enlisted in the corps might have a compact and yet a thoroughly ample manual covering their field of duty. If we may judge by popular report of what has occurred of late in camp and in hospital, it would seem that this book has not had a wide army circulation, or else that its teachings have been singularly disregarded. Surely no intelligent man, whatever his military rank or corps, could read this book save to his benefit and to that of others. It is a most practical, simple, and straightforward presentation of military hygiene, medicine, and surgery adapted to the uses and the comprehension of men not technically trained in medicine.

The book consists of three divisions, of which the first deals with military hospitals and hospital duties, service in the field, camps, prevention of camp diseases, camp hygiene, and the like. The second part treats of anatomy and physiology in the rudimentary manner customary in instructing nurses. The third part applies to the special duties of the hospital corps in the management of cases, and to all intents and purposes comprises what ordinarily is taught as "first aid to the injured."

Dr. Smart has done his work well, and the book is both valuable and interesting; indeed, to read it is no task, but a pleasure, so agreeable is the writer's style. How valuable a trait this is is self-evident when one remembers that the work is designed for the non-professional reader; though, in truth, we think that many a military doctor might read the book to his profit. It is in the so-called militia that this book can bring about much good. The sad experience of recent months would have been almost an impossibility had simple yet vital

instructions, such as this book contains, been generally known. Indeed, it seems as if in future emergencies of the kind there should be required, not alone of medical officers, but also of line officers and of all in whose charge rest the health and the lives of men, a thorough familiarity with a work such as this.

Ensayo de una Higiene de la Intelección. Contribución al estudio de las relaciones que existen entre lo físico y lo moral del hombre, y manera de aprovechar estas relaciones en beneficio de su salud corpórea y mental. Por el Doctor NICASIO MARISCAL Y GARCIA, Director-Jefe del Laboratorio Central de Medicina Legal, etc. Madrid: Ricardo Rojas, 1898. Pp. 551.

INTELLECTUAL hygiene is an interesting topic about which we hear much and see little. Ever since the days of the Greek philosophers the conflict between high living and high thinking has been a favorite subject for those who knew much and those who knew little and who were desirous of imparting that knowledge to the world. The reviewer may possibly be pardoned if he ventures the opinion that Spain has not succeeded where others have failed. Our author has conscientiously tried to solve the knotty problems continually presented to those who endeavor to lead the intellectual life, but he gravely acknowledges the difficulty of deciding whether the intellectual man should marry, how much he should eat and drink, and how he should live. He also expresses a doubt, which in these regenerate days must be regarded as the rankest heresy, that women are not mentally equipped to lead the higher life, but must be content to act out a simple existence. Despite these blemishes, the volume may be recommended as a storehouse of the results of a vast amount of reading and study of the ancient and modern literature of the subject.

La Grippe. PAR L. GALLIARD, Médecin de l'Hôpital Saint-Antoine. Avec 7 figures dans le texte. Paris: J. B. Baillière et fils, 1898. Pp. 5 to 100.

THIS small monograph belongs to a series of similar volumes intended to present the more recent medical facts in a clear and concise way. They do not correspond to the familiar "quiz compend," but aim rather higher, contain references to the literature, and are confined to a single disease, which thus receives fuller treatment than is granted in any but the largest treatises on medicine. An excellent and up-to-date article on influenza is contained in this volume, giving in a very comprehensive manner all that is definitely known about the disease.

Elements of Sanitary Engineering. By MANSFIELD MERRIMAN, Professor of Civil Engineering in Lehigh University. First Edition. New York: John Wiley and Sons, 1898. Pp. 5-216.

THIS is a good book for any man to read, although it is primarily intended to be used as a text-book for students of sanitary engineering. It deals with those fundamental principles of water supply and sewerage that should be parts of a general education, but of which too many of us are fearfully ignorant. It brings home to us the wonderful advance in sanitary science that has taken place in the latter half of this wonderful century, and it is written in such a clear and easy style that one may read it through without loss of interest or fatigue.

The introduction defines sanitary science as embracing "those principles and methods by which the health of a community is promoted and the spread of disease is prevented." What the physician is to the individual the sanitary engineer is to the community, and so well has he done his work that in this country the average length of human life has been increased four years in the last half century. Let us, then, do our part by getting an intelligent understanding of the great principles of sanitary science, so that we can more efficiently co-operate with him.

Wesen, Ursache und Behandlung der Zuckerkrankheit (Diabetes mellitus). Von Dr. ALBERT LENNE, in Bad Neuenahr. Berlin: S. Karger, 1898. Pp. iv+152.

THE subject of diabetes mellitus is undoubtedly popular at present, the current medical periodicals rarely permitting a month to pass without some article on the subject, while several large volumes have recently appeared wholly devoted to this disease. Nevertheless this small monograph is a welcome addition. It is brightly and clearly written, and the author's experience has been unusually large, so that his views on the subject, though somewhat out of the ordinary, have a clinical foundation. In the section devoted to purely theoretical considerations on the nature of the disease, he differs sharply from von Noorden and other authorities, though only on minor points. The chapters on symptoms, on the method of reaching a prognosis, and on treatment are the best in the book. The author has slight faith in drugs, with the exception of opium, and in fact does not regard the latter with so much favor as is usually accorded to it. Diet, climate, and mineral waters are the three mainstays. A long series of analytical tables of food products, arranged so as to lighten the labor of making up a dietary, completes the book, which should be read by all those interested in the treatment of the disease.

The Office Treatment of Hemorrhoids, Fistula, etc., without Operation, together with Remarks on the Relation of Diseases of the Rectum to other Diseases in Both Sexes, but especially in Women, and the Abuse of the Operation of Colostomy. By CHARLES B. KELSEY, A. M., M. D., Late Professor of Surgery at the New York Post-graduate Medical School and Hospital, etc. New York: E. R. Pelton, 1898. Pp. 9 to 68.

THESE three lectures on the office treatment of hemorrhoids, fistula, etc., without operation are an outcome of the author's large experience in such work, and as such are to be commended to the thoughtful consideration of all those interested in the subject. The book is unusually well printed and bound.

Ueber Spermatocystitis Gonorrhoea. Von Dr. WALTER COLLAN, Assistent der dermatologischen Klinik in Helsingfors. Mit einer chromolithographischen und einer Lichtdruck-Tafel. Hamburg und Leipzig: Leopold Voss, 1898. Pp. 73.

THE attention of the students of genito-urinary diseases has, in the past few years, been largely directed to the study of the little-known changes which take place in the vesicula seminalis as a result of acute or chronic gonorrhoeal inflammation, and the problems are by no means completely disposed of. The pamphlet before us

is devoted to a discussion of the results obtained from the clinical and pathological examination of fifteen cases of the disease. Interesting observations are given on the anatomical relations and position of the seminal vesicles, and their inaccessibility to the ordinary examining finger is rather conclusively shown. For the purpose of massage and "stripping" of these organs the author recommends the instrument devised by Feleki as the simplest and best. The chapters on symptoms and treatment contain nothing original.

L'Occlusion intestinale. Par M. D. BAUBY, Chef des travaux de médecine opératoire à la Faculté de Toulouse, etc. Paris: Masson et Cie., 1898. Pp. 5 to 206. [*Encyclopédie scientifique des aide-mémoire.*]

THIS little volume is a type of those, now so common, which afford a very superficial view of the subject they are presumed to treat of, but are in no way to be considered as replacing larger and more thorough works on the same topic. The ground of intestinal obstruction has been very fairly covered in this volume, however, and it may prove useful to the student searching for the shortest road to medical wisdom.

Énergétique musculaire. Par M. F. LAULANIE, Professeur de physiologie à l'École vétérinaire de Toulouse. Avec une préface par M. A. CATAVEAU, Membre de l'Institut. Paris: Masson et Cie., 1898. Pp. 5 to 206. [*Encyclopédie scientifique des aide-mémoire.*]

A SHORT but useful collection of the facts concerning muscular energy is contained in this little work. It is divided into three sections. The first treats of the sources of muscular energy, the second of the work produced by the expenditure of this energy, and the third of muscle thermodynamics. The treatment is entirely free from mathematics of any sort, and a rather scanty recognition is offered of the many recent discoveries in physiological chemistry.

Laboratory Work in Physiological Chemistry. By FERDINAND G. NOVY, Sc. D., M. D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. Second Edition, revised and enlarged. With Frontispiece and Twenty-four Illustrations. Ann Arbor: George Wahr, 1898. Pp. 7 to 326.

THE importance of a knowledge of physiological chemistry—as thorough as the nature of the subject will permit—on the part of the physician, and primarily on the part of the student of medicine, is not to be gainsaid. It is, of course, true that physiological chemistry is for the greater part a science of relatively recent growth. At present, however, the law of inertia too often shows itself by a contentment of the physician with so much of physiological chemical knowledge as is comprised in urinalysis, and no more. No doubt the extension of laboratory work in our medical schools will ere long correct this tendency, and to this end works like that of Dr. Novy will much contribute. The work in its present form is a considerable expansion of the first edition, but, at the same time, of the same general character and usefulness. It is, primarily, of course, an adjunct and a guide for the laboratory, but, while the full utility will not be evolved without the practical application of its teachings, it is a work which those who are not students may read to their profit, even though

their laboratory facilities be trifling or altogether wanting. The practitioner, therefore, is by no means excluded from participation in the assistance the book affords.

Hernies. Par Dr. PAUL BERGER, Professeur de clinique chirurgicale à la Faculté de médecine de Paris, etc. Extrait du *Traité de chirurgie*. Deuxième édition. Paris: Masson et Cie., 1898. Pp. 23 to 402.

THIS scholarly and practical volume is the section on hernia from the large *Traité de chirurgie* edited by Duplay and Reclus, which has been issued separately. It is a tribute to the experience and study of its author, and is certainly one of the best and clearest of the shorter works on the subject. The illustrations are excellent, the print is good, and the whole work has been brought up to date.

A Laboratory Guide in Uroanalysis and Toxicology. By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry, Physics, and Toxicology in the Medical Department, Cornell University, etc. Fourth Edition. New York: William Wood & Co., 1898. Pp. vi-111.

THIS book seems to be intended chiefly for the use of students in the medical department of Cornell University. It therefore very properly emphasizes chiefly those time-honored methods of procedure with which every student must become familiar before he can proceed to new fields of exploration and conquest. The book is of handy form for its purpose, and contains blank pages for notes. The orthography is somewhat less conservative than the text, for we are introduced to "bromids," "cyanids," and "strychnin."

BOOKS, ETC., RECEIVED.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M. D. In Twenty Volumes. Volume XVII. Infectious Diseases and Malignant New Growths. New York: William Wood & Co., 1899. Pp. vi-3 to 715.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, etc. With Two Hundred and Fifty-five Illustrations and Two Chromolithographic Plates. Third Edition, thoroughly revised. Philadelphia: W. B. Saunders, 1899. Pp. 7 to 696. [Price, \$1.]

Holden's Human Osteology: Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopic Structure of Bone, and its Development. Edited by Charles Stewart, F. R. S., Hunterian Professor of Comparative Anatomy and Physiology, Royal College of Surgeons of England, etc., and R. W. Reid, M. D., F. R. C. S., Regius Professor of Anatomy in the University of Aberdeen. Third Edition. London: J. & A. Churchill, 1899. Pp. ix-358. [Price, \$5.25.]

Ocular Therapeutics for Physician and Students. By F. W. Max, Ophthalmologist, M. D. (Minden, Germany), Late Assistant Physician in the Ophthalmological Clinical Institute of the Royal Prussian University of Berlin, etc. Translated and edited by Charles A. Oliver, A. M., M. D. (Cincinnati), one of the Ophthalmic Surgeons to

the Philadelphia Hospital, etc. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. xv-9 to 274. [Price, \$1.75.]

A Practical Handbook on the Muscular Anomalies of the Eye. By Howard F. Hansell, A. M., M. D., Clinical Professor of Ophthalmology, Jefferson Medical College, etc., and Wendell Reber, M. D., Instructor in Ophthalmology, Philadelphia Polyclinic and College for Graduates in Medicine, etc. Twenty-eight Illustrations and One Plate. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. 9 to 182. [Price, \$1.50.]

A Text-book of Mechano-therapy (Massage and Medical Gymnastics). Especially Prepared for the Use of Medical Students and Trained Nurses. By Axel V. Grafstrom, B. Sc., M. D., Late House Surgeon, City Hospital, Blackwell's Island, New York. With Eleven Pen-and-ink Sketches by the Author. Philadelphia: W. B. Saunders, 1899. Pp. 5 to 139. [Price, \$1.]

Manual of Clinical Chemistry. By Elias H. Bartley, B. S., M. D., Ph. G., Professor of Chemistry and Toxicology in the Long Island College Hospital, etc. Thirty-three Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. vi-9 to 150. [Price, \$1.]

The Pocket Therapist. A Concise Manual of Modern Treatment, for the Physician and Student. Arranged Alphabetically for Ready Reference. By Thomas Stretch Dowse, M. D., Fellow of the Royal College of Physicians of Edinburgh, etc. New York: Wilbur B. Ketcham, 1899. Pp. 7 to 179. [Price, \$1.50.]

Transactions of the American Climatological Association. For the Year 1898. Volume XIV.

The Early Diagnosis of Cancer of the Stomach. By Charles D. Aaron, M. D., of Detroit. [Reprinted from the *Journal of the American Medical Association*.]

Caries of the Teeth and Diseases of the Stomach. By Charles D. Aaron, M. D. [Reprinted from the *Charlotte Medical Journal*.]

Albuminuria during Pregnancy, without Convulsions of the Mother, but with Eclampsia of the Newborn Infant. By Henry Kreutzmann, M. D., of San Francisco. [Reprinted from the *Archives of Pediatrics*.]

Diabetes Mellitus and Carcinoma Uteri; Hysterectomy; Recovery. By Henry Kreutzmann, M. D. [Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children*.]

Torsion of the Pedicle of an Ovarian Tumor, with Acute Symptoms. By Henry Kreutzmann, M. D. [Reprinted from the *Pacific Record of Medicine and Surgery*.]

The Caustic Action of Arsenic in treating Carcinomatous Growths Accessible from the Surface of the Body. By C. W. Simmons, M. D., of Philadelphia. [Reprinted from the *Hahnemannian Monthly*.]

Some Preventives. By A. Jacobi, M. D. [Reprinted from the *Philadelphia Medical Journal*.]

Experimental Researches about Mixed Infection in Chronic Pulmonary Tuberculosis. By C. Fisch, M. D., of St. Louis. [Reprinted from the *St. Louis Medical Review*.]

The Porro Operation versus Total Hysterectomy. By H. J. Boldt, M. D. [Reprinted from the *Transactions of the American Gynecological Association*.]

Some Sources of Failure in treating Lacrymal Obstructions. By Leavitt Connor, M. D., of Detroit. [Reprinted from the *Journal of the American Medical Association*.]

Mechanical and Surgical Treatment of Fractures of the Neck of the Femur. By Arthur J. Gillette, M. D.,

of St. Paul. [Reprinted from the *Northwestern Lancet*.]

Entotical Sound Perceptions. By Lewis S. Somers, M. D., of Philadelphia. [Reprinted from *Medicine*.]

Miscellany.

The Infrequency of Typhoid Fever in Infancy.—Dr. John Lovett Morse and Mr. Hartley Wales Thayer (*Boston Medical and Surgical Journal*, January 12th), as a result of investigations made by means of Widal's serum reaction on fifty cases of suspicious gastro-enteric disturbances in children, arrive at the following conclusions: 1. Typhoid fever, as has been commonly believed, is an unusual disease in infancy. 2. It is possible that women whose blood gives a positive Widal reaction, even though it be years after the occurrence of the disease, may in some way transmit this to their infants.

Strontium in the Treatment of Acute Nephritis.—Dr. J. M. Da Costa (*Dunglison's College and Clinical Record*, December, 1898), in a clinical lecture delivered at the Pennsylvania hospital, said that in a case of acute nephritis he had found, from experience, the following treatment to be eminently satisfactory. He gave pilocarpine, hypodermically, every two hours, until he secured free action from the skin. If preferred, the pilocarpine might be given by the mouth; but he preferred, in these cases, to give the first dose hypodermically. In addition to this, he gave the lactate of strontium, fifteen grains at a dose, four times daily. This drug was one of the most efficient, non-irritating diuretics that we possessed; in addition, he was a believer in dry cupping over the kidneys, and in the use of hot vapor baths.

There were three drugs in acute nephritis which, to his mind, stood out with considerable sharpness above all others for efficiency—pilocarpine, digitalis, and strontium. He was particularly pleased with the value of strontium, which he considered indispensable in many of these cases. In this case they found that the quantity of urine, under this treatment, had steadily and rapidly increased from eight ounces on the first day to thirty-six ounces daily, then to forty-four ounces, then up to fifty-five ounces, while for the last twenty-four hours the patient had voided thirty-five ounces, with diminution the resident explained by the fact that the patient was given a hot bath. As to the increased color of the urine, it now contained the normal quantity of urea; there were still some albumin and tube casts, but the blood had disappeared. He directed the continuance of the treatment, keeping the patient on a milk diet, and using dry cups over the kidneys.

Successful Operation for Cerebellar Abscess.—Dr. J. H. Nicoll (*Glasgow Medical Journal*, January), related the following case to the Glasgow Medical and Surgical Society on November 4, 1898:

"The patient, aged twenty-five years, was first seen on May 17, 1898, and was found to be suffering from a discharge from the left ear, accompanied by dizziness of ten years' duration. For one month, also, there had been pain in the ear, general headache, and distention of pupils. A week later these symptoms became associated with vomiting, shivering, tenderness over the mastoid process, and drowsiness. On the following day the

antrum was opened by Dr. Barr and cleared of pus. It was then packed. In the next two days the patient became more apathetic, nystagmus developed, and the left pupil was variable in size. There was commencing optic neuritis in the left eye, and later on in the right. There was also repeated yawning. On the third day the left pupil became twice as large as the right. The temperature was subnormal, and the pulse 96. Dr. Nicoll then operated, opening up the mastoid orifice and exploring the sinus to the depth of an inch. As no pus was found, and as the bone was very dense, he trephined at first over the auditory meatus, and then just at the edge of the occipital bone. In the latter situation an abscess was found and evacuated.

"Progress to recovery, during which a drainage tube was kept in, was uninterrupted, but very slow; and, therefore, about six weeks afterward, Dr. Nicoll operated again, working into the cerebellar fossa round the knee of the sinus, having opened it from just behind the auditory meatus, thus tapping the abscess and making the two channels communicate. This cavity was douched out for some time. The man is now well, but the mastoid communication with the middle ear is still kept open. There were about twelve cases on record of recovery from cerebellar abscess after operation."

The Trend of Modern Medical Journalism.—An interesting article on the tendencies in Medical Journalism appears in the *Boston Medical and Surgical Journal* for January 5th, from which we quote the following practical remarks: "To our mind the weekly journal has another and even more important function to perform than the publication of original papers, and one which is of continually growing importance, not only to the medical profession but to the community at large. We refer to the power it has, or should have, in influencing public opinion toward high standards of ethics in medical matters and hygiene in the broad sense. This is the sole prerogative of the weekly medical journal, and one of the directions toward which it is more and more tending. Here we have a field of usefulness which is quite unlimited and which may, no doubt, be cultivated much more assiduously than it has been up to this time. A good sign in this direction was the active participation of our leading weekly medical journals in the discussion growing out of the medical management of the army in the recent war with Spain. Arduous as certain of these discussions were, they all tended toward a good end—namely, a clear expression of opinion on a point of public importance. As most of our religious contemporaries have left the bounds of the strictly churchly and entered a larger sphere of human interest, so may we look for an expansion of the scope of the medical journal to include matters of public concern which are in any way associated with the progress of medicine. The tendency in the future will be toward a closer scrutiny of the editorial pages and a demand for a definite expression of opinion on topics of general public concern. Here lies the opportunity of the weekly journal, and its success will be measured by the clear appreciation of this fact by its editors. It will not rise to this opportunity, we think, if it is to be a mere digest, and we shall be obliged to either ignore its extreme practical importance, which is fatal with respect to its value, or to make it a more definite and useful organ."

A Chinese Medical Journal.—We have from the *British Medical Journal* for December 17th, 1898, the first number of a new monthly journal, entitled "The Chinese Medical Journal," published by the Chinese Medical Association, 1, Victoria Road, Singapore.

ly *Journal of Medicine, Surgery, and Hygiene*, has just appeared. It is edited by Wan Tün Mo, a diplomate of the Imperial Medical College, Tientsin, and resident surgeon Alice Memorial Hospital, Hongkong. The publication of this journal, says the *British Medical Journal*, marks an epoch in the history of western medical science in China. Slowly but surely the more enlightened Chinese are becoming convinced of the superiority of western methods of medicine, surgery, and hygiene. In the first issue the scope and object of the magazine are set forth in the following passage: "The journal is published solely for advancement of medical science, and all contributions to its pages must be in strict harmony with the great facts on which true medical science is based with special reference to the facts of anatomy, physiology, botany, chemistry. Each issue is to consist of six sections: 1. Leading articles and translated selections from recognized authorities in the medical world. 2. Special cases and treatment. 3. To deal with new methods. 4. To give instruction in first principles of anatomy and physiology. 5. Notes on laws of health, food, sanitation. 6. Miscellaneous, including news of special interest to students of medicine. Western doctors in China will be asked to report cases of special interest. Illustrated plates and diagrams will be used." The first issue contains three leading articles—two from western sources treating of diagnosis and the treatment of disease; the third is an exhaustive inquiry into the nature and causes of bubonic plague. There is also an introductory article on the study of anatomy and physiology. The section on hygiene treats of impurities in water and maladies to which they give rise; preservation of eyesight, means of maintaining the body in health, and the importance of pure air. Dr. Wan, the editor, is a man of large professional experience, and it is hoped that his new venture will have great success.

The Advantages of a Knowledge of the Patient's Constitution.—There is so much truth in the following from the *Philadelphia Medical Journal* for December 24th that we reproduce it in its entirety:

"The power of resisting shock and infection varies widely, as is well known, among different races and among different people of the same race. The Irish are thought by some to be abnormally susceptible to shock, infection, or injury, while Oriental races are almost absolutely impassive under like conditions. An instance of unusual vitality is reported by Bidie, of the Indian Medical Service, in the *Indian Lancet* of November 1st: A native boy, aged fifteen, was gored by a bull in the abdomen, making a wound through which the intestines protruded and tearing the gut in several places. The coils of intestine were snared by the natives with *cow dung*, covered with a piece of coconut and some leaves, and the boy was carried five miles in a country cart over rough roads, reaching the hospital about six hours after the time of injury. The parts were cleansed, the intestines sutured, the abdomen was closed, and the wound dressed antiseptically. Shock was entirely absent, and the patient made an uneventful recovery, with rise of temperature only on three occasions after the operation.

"Unfortunately for both patient and surgeon, constitutions of such staying power are unusual, but this makes all the more imperative the cultivation of such surgical judgment as will enable one to predict with a fair amount of accuracy a patient's capacity to withstand surgical shock before undertaking operations of

expediency. There is some justification for the much-abused saying, that such a doctor 'knows the constitution of the family'; long acquaintance does help us to understand the personal equation. It is probable that more earnest, conscientious effort on the part of the surgeon, exercised every day in every case, to try to estimate the physical peculiarities of patients, would succeed in training the faculties so that the limits of intervention might, in certain cases, be extended, and in other cases sad accidents might be avoided."

The Teaching of Physiology in our Public Schools.—We have ourselves had something to say on this subject, and have protested against an unfair use of this vantage ground for exploiting the fads of cranks of whatever kind. We are glad to welcome the support of our excellent contemporary the *Philadelphia Medical Journal*, which in its issue for December 24th has the following pertinent remarks:

"In some States, we believe, it is obligatory that the text-books on physiology, made to order for the public schools, shall inculcate certain doctrines as to the use of alcohol and tobacco that represent merely the views of the minority on these subjects. The older children themselves, it is said, resent the expression of views found in these books as reflecting on the opinions and customs of their parents in their own homes. If a little learning is ever a dangerous thing it is so certainly in the case of medical and physiological science. The teaching of physiology to public-school children by teachers who themselves are profoundly ignorant of the subject must be superficial in the extreme. One of the faults of our public-school systems is the tendency to do too much, and to do it in a merely routine and mechanical manner. When, however, this teaching is made the means of propagating the individual views of faddists and theorists, the evils are twofold. First, the knowledge inculcated is likely to be false or misleading. Second, the doctrines are likely to repel intelligent scholars and drive them to the other extreme than the one aimed at. We think it goes without saying that all partisan questions, whether in politics, theology, or hygiene, have no place in the curriculums of our public schools."

The Toxæmic Factor in Diabetes Mellitus.—Dr. G. W. McCaskey (*Medicine*, January) thus sums up, in a paper read before the Northwestern Ohio Medical Association, a clinical study of this subject: The following conclusions appear to be warranted: 1. That all cases of persistent glycosuria are cases of diabetes mellitus, of varying grades. 2. That diabetes mellitus is a disease of diverse origin, the unity of the clinical picture being for the most part dependent upon the glycaemia and glycosuria, which are mere incidents, although dominating factors of the disease. 3. That phloridzin diabetes is not essentially different from clinical diabetes, and that it renders plausible the assumption of a chemical factor, either as a primary or as an important secondary cause in the clinical type of the disease. 4. That normal sugar transformation in the blood, the failure of which is responsible for the glycaemia and glycosuria, is the result of a chemical product in the blood, derived in man principally if not exclusively from the pancreas, and thrown directly into the blood from the pancreatic cells, without the intervention of the duct. 5. That the direct chemical antagonism of this chemical substance by another is no more improbable than such antagonism of a toxine by an antidote, which Martin has recently established. 6. It is probable on both clinical and experi-

mental grounds that certain chemical poisons, for the most part of gastro-intestinal origin, but possibly also from faulty tissue metabolism, or as a perverted "internal secretion" from glands, not necessarily ductless, either directly or indirectly antagonize, in whole or in part, the sugar-destroying substance in the blood, thus giving rise to glycaemia and glycosuria, and thus either primarily causing or at least exaggerating the clinical phenomena of diabetes mellitus, in a certain group of cases. 7. If further investigations should corroborate the conclusions here provisionally set forth, it would be advisable hereafter to investigate the bacteriology of the stomach and intestines in cases of diabetes mellitus, and if evidences of virulent bacterial, protozoal, or parasitic growth are found, these conditions should be met by suitable treatment, not with the expectation of entirely supplanting dietetic treatment, but as an important auxiliary to the latter, possibly rendering its restrictions less severe, with less resulting impairment of nutrition.

The Philosophy of Play.—In a very interesting article by Luther Gulick, in *Appleton's Popular Science Monthly* for October, the genetic idea of play is elaborated. The body in reaching adult age must rehearse the history of the race. It starts from a single cell and ends in the most elaborate differentiation. Not only does the body rehearse the life of the race, but the mind also, and the plays of children are the history of these forgotten activities. Thus it is that hunting, fishing, sailing, swimming, mountain climbing, and the like are all aspects of our past history, and are pleasurable because in the unconscious memory they are associated with the organism's past welfare. Play is therefore the ontogenetic rehearsal of the phylogenetic series, and the satisfaction that it gives proceeds from the gratification that comes from realizing anew these deep elemental racial functions.—*Southern Practitioner*, January.

When to Operate in Appendicular Disease.—Dr. A. Morgan Cartledge (*Memphis Lancet*, January) draws the following conclusions: 1. Probably ninety-eight per cent. of the patients who die of acute appendicitis without operation have the fulminating variety of the disease; operation to be of service must be done in the first twenty-four hours—better the first twelve. 2. In view of the fact that we have no means of knowing the probable course of a given attack of appendicitis, operation, when possible, should be performed within the first twenty-four hours after the onset of symptoms. 3. Patients seen after the third day should not be operated upon until after the attack, or until purulent formations, if such take place, have been walled off, and the patient practically rid of general sepsis. The exception to this rule is the rupture of an appendicular abscess into the peritoneal cavity (a very rare accident), when abdominal section should be immediately performed. 4. Probably as many patients recover from general septic peritonitis by stimulants and purgatives as by operations. In either event, if it is a case of true general septic peritonitis, the mortality will not be far from ninety-five per cent. Contributions to medical literature would indicate that there is a need on the part of the profession of more definite views as to the nature of this disease. If operated upon at all, no attempt at general cleansing of the cavity should be practised; quickly assist Nature to take care of the desperate patient by removing the source of the fire; to do more is to add the shock of an unnecessary operation

to that of an already nearly exhausted vitality. 5. Subject to interval operations patients who have suffered an unmistakable attack of the disease. 6. Don't operate too soon after a severe attack with many adhesions; the operation will be greatly simplified by waiting a few weeks longer; in the mean time keep the patient upon light diet and little exercise. Patients do not usually have a recurrence until the adhesions or splints have been removed by absorption. The mortality from interval operations should not be more than one per cent.

Gouty Angina.—Dr. R. Le Clere (*Normandie médicale*, December 15th) concludes a paper based on the observations of six cases in which pharyngeal manifestations preceded an attack of gout, and disappeared when the articular phenomena appeared, as follows: 1. There is such a thing as gouty angina. 2. This term should be applied only to such cases as are premonitory to an access of gout. 3. This angina is characterized in general by an intense congestion with edema, occupying the velum palati and even the laryngeal vestibulum. 4. The description of this angina corresponds to that of the so-called rheumatic angina as understood by Lasèque. 5. The duration of this congestion extends from some hours to three days. 6. It is not amenable to any special treatment, save to such derivative measures as may tend to hasten the articular determination, and in this it resembles rheumatic angina, which is not ameliorated by salicylate of sodium.

Lysol Poisoning following an Intra-uterine Douche.—In the *Centralblatt für Gynäkologie*, 1898, No. 39, Cramer reports the following interesting case: The patient, a primipara, aged twenty-two years, was taken in labor, examined by a physician at her home, and was sent to the hospital at Bonn, where it was found that she was seven months pregnant, in labor, the fetus presenting by the breech. The birth of the child was not specially difficult, and the placenta was entirely expelled without delay. The patient received a vaginal douche of one per cent. lysol. Several hours later she had fever and rapid pulse, and the uterus was washed out with lysol, one per cent. The uterus was strongly ante-flexed, and difficulty was experienced in introducing the douche tube. After a litre and a half of the solution had been used the patient suddenly became rest-less, breathed heavily, and became unconscious. The pulse was rapid and weak. In a few moments she regained consciousness and complained of giddiness. The pulse and temperature fell. Her child perished soon after birth, the autopsy revealing no cause for its death. The patient developed icterus and abdominal tenderness. The urine was dark brownish-black, full of casts and blood cells. There was considerable albumin present. An examination of the urine for phenol did not give a clear reaction. Tribromophenol was found, however, in considerable quantity. The patient died from exhaustion on the tenth day after confinement, with symptoms which would be difficult to explain clearly. On autopsy it was found that septic infection was present. At the fundus of the uterus there was an area of ulceration, from which thrombi had extended into the pelvic veins. There was also an acute hemorrhagic nephritis.

In commenting upon the case, Cramer calls attention to the condition of the urine, which contained albumin and abundant debris from the kidney. Regarding the manner in which absorption occurred when the douche was given, it is thought that lysol entered direct

ly into the blood current through surfaces opened by ulceration. Experiment has shown that the injection of carbolic solution into the blood-vessel of an animal causes sudden collapse, exactly like that observed in this case.

Whether this alone would have proved fatal is very doubtful. A severe septic process was present in the endometrium quite sufficient to have brought about a fatal result. There were reasons for believing that the birth had been criminally induced, and abundant opportunity for septic infection had occurred. An interesting symptom in the case was the strong, full pulse, which the patient had after the first shock following the injection. This is often seen in eclamptic patients, and is very significant of acute nephritis in the pregnant woman.

It has been Cramer's custom to employ intra-uterine douches of from 0.5 to one per cent. lysol, using from ten to fifteen litres, and he has seen nothing but the best results from this usage. The case reported would not incline him to abandon this method of treatment.—*American Journal of the Medical Sciences*, January.

The Presence of Meconium from a Medico-legal Aspect.—Bestler (*Centralblatt für Gynäkologie*, 1898, No. 38; *American Journal of the Medical Sciences*, January, 1899) examined seventy-four newborn children to determine at what time the meconium is entirely discharged. He found that it is not expelled until the second or fourth day, and in children fed from the bottle as late as the fifth or sixth. It is evident that the presence of meconium is not a reliable sign of the age of the child.

Microscopical examination of the meconium showed epidermal cells, crystals of cholesterol, and lanugo hairs. Meconium corpuscles were also present.

Honors for Sir Henry Thompson, F. R. C. S.—According to the *Lancet* for January 7th, Sir Henry Thompson, the well-known genito-urinary specialist, of London, has been promoted to a baronetcy.

A Curious Case for Forensic Medicine.—According to the *Gazette médicale de Paris* for December 17th, Professor Lacassagne recently examined at Lyons the cadaver of a man taken from the river Saône whose trunk was surrounded by an enormous serpent. The cadaver was mummified, and it was thought must have been at least two years entombed. A professional naturalist stated that the serpent was a boa of Senegal. It had not been dead more than a month at the outside. M. Lacassagne thinks that the corpse was probably that of a suicide which, for some reason or another, had been retained at the bottom of the water for a long time until it was brought to the surface by a swell. By mere chance the boa, thrown probably into the Saône by the proprietors of some traveling menagerie, must have encountered the cadaver. The affair has caused considerable interest, attracting crowds to the morgue.

A Street to be named after Charcot.—According to the *Gazette médicale de Paris* for December 17th, M. Rançon has made a proposal to the Municipal Council of Paris to have the rue Campagne-première named after Charcot.

A Medical School for Tonquin.—The *Gazette médicale de Paris* for December 17th informs us that M. Doumer has a project for creating a native school of medicine at Hanoi.

A Monument to Charcot.—According to the *Gazette de gynécologie* for December 15th, the inauguration of the monument to Charcot before the Salpêtrière Hospital took place under the presidency of the minister of public instruction on December 4th.

The University of Leipzig.—According to the *Gazette de gynécologie* for December 15th, Professor Röntgen, the discoverer of the X rays, has been called from the University of Würzburg to the chair of physics at Leipzig, and has accepted the office.

The Doctor in Drama.—According to the *Gazette médicale de Paris* for December 17th, Amédée Rolland recently had presented at the Odéon Theatre a drama likely, according to the critics, to be a success. *The Doctor's Holiday* is said to be a very strong work. A physician ruralizing at a friend's house observes that the husband is strangely falling off in health. The doctor studies him quietly. The patient's state seems inexplicable, when one day the physician discovers poison in a glass of water brought to him by his wife. The woman is jealous of a fair friend and is slowly poisoning her husband. From this point begins a struggle between the jealous wife, who wishes to kill her husband without saying anything, and the physician, who essays to save him without incriminating her. In the end the physician restores the almost dying man to life; brings back the wife to her duty with profound remorse; and she, so lately criminal, now becomes devoted, humbly repentant, and ready to atone for a week of horror by an entire life of devoted self-abnegation. The rival takes herself off, and the good doctor has not lost his holiday.

The Hospital Ship Bay State.—The *Boston Medical and Surgical Journal* for January 19th is largely taken up with a very interesting series of illustrated articles descriptive of the hospital ship *Bay State*, which were read before the Boston Society for Medical Improvement on November 21st. The articles are: The Hospital Ship *Bay State*, by Dr. Herbert L. Burrell; Construction of the Massachusetts Hospital Ship *Bay State*, by Mr. J. T. Boyd, consulting engineer; The Medical Equipment, by Dr. E. H. Bradford; The Method and Character of Work done by the Massachusetts Hospital Ship *Bay State*, by Dr. Herbert L. Burrell; The Medical and Surgical History of the Hospital Ship *Bay State*, by Dr. J. T. Bottomley; The Duties and Work of the Purser of the Massachusetts Hospital Ship *Bay State*, by Mr. W. H. Seabury, volunteer purser; and The Nursing Care on a Hospital Ship, by Miss C. W. Cayford.

Dr. Reed's Sociological Study of "Christian Science."—Messrs. McClelland & Co., of Cincinnati, have published in pamphlet form Dr. Charles A. L. Reed's address entitled *Christian Science; a Sociological Study*. It is a strong arraignment of the peculiar sect. We understand that the pamphlet is to be had at a nominal price. It ought to be circulated extensively.

A New French Catalogue of Scientific Books.—Messrs. J. B. Baillière et Fils, of No. 19 rue Haute-Feuille, Paris, have recently issued their *Catalogue général des livres de sciences*, containing 112 double-columned pages and the titles, etc., of about five thousand works on medicine and the sciences. They offer to send it to any applicant who incloses postage stamps, French or foreign, to the amount of fifty centimes.

rounded or flattened tumor on the affected bone, due to the inflammatory swelling of the periosteal membrane and subsequent exudation. The subjective symptoms are slight; the patient's general condition remains good, and he usually continues to attend to his ordinary vocations. The inflammatory process begins in the internal layer of the periosteum, and gradually spreads through it and even to the subjacent bone. The termination may be in resolution and return to the normal, more especially if appropriate treatment is vigorously carried out; or suppuration may occur, with necrosis and exfoliation of the layer of bone thus cut off from its nutritive supply. Quite commonly, however, the process goes to neither extreme; a chronic and very slightly painful periosteal swelling persists; osteophytes are formed in the periosteal layers, and oval or hemispherical enlargements of the bone, the so-called syphilitic topi or nodes, are formed. In the same way a simple osteitis, very chronic and accompanied by but little pain and no general symptoms at all, may set in. The inflammatory process usually ends in sclerosis and eburnation; very rarely is there abscess formation, with caries or necrosis.

In the true gummatous periostitis the swellings on the bones gradually soften and assume a deceptive appearance of fluctuation; and the subjacent bone is almost always involved in the process. It may end in resolution, more especially when treated; but not uncommonly the skin over the tumor becomes thinned, reddened, and finally breaks, and the characteristic slimy, blood-stained, and purulent fluid exudes. The bone below is found carious, eroded, or perforated, and an exostotic wall surrounds the margins of the affected area. The cavity is finally filled up with granulations, developing into connective tissue. Thus bone scars, perforations of the flat bones, and other characteristic deformities occur.

Gummatous osteitis rarely occurs without simultaneous or antecedent involvement of the periosteum; but the process may begin in the interior of the bone in numerous small foci, and lead to destruction and rarification of the bone tissue. If the foci are not too large and numerous, the condition may occasion hardly any appreciable symptoms, save slight pain on percussion, and a normal or osteoporotic bone be left behind. If they are large and numerous, swelling of the bone with marked tenderness occurs; here the disease material may remain as cheesy foci after the process has ended; but more commonly necrosis and sequestrum formation occurs. The cavity left behind is usually only incompletely filled with connective tissue.

As regards the cranial bones more especially, syphilitic inflammations, either simple or gummatous, cause but little general disturbance when the external periosteum and table only are involved. When the internal table and membrane are affected cerebral compression may result; but even the severest cases react promptly to

appropriate treatment. The very worst cases of gummatous osteitis, however, ending in necrosis, may show hardly any symptoms during life. Thus Moore exhibited a skull at the London Pathological Society in which the entire calvarium was worm-eaten, the cavities being filled with gummatous material. The patient had exhibited no symptoms during life save two eczematike patches upon the scalp.

In gummatous osteitis and periostitis of the cranial bones the soft parts are usually gradually destroyed, and the dead bone appears as a blackened mass in the depths of the lesion. The course of the malady is extremely chronic, and many months usually elapse before the dead tissue is cast off. If the process is very extensive, and both tables are involved, the brain covered by the meninges is exposed when the necrotic bone comes away. Even in these cases, however, the ultimate result is usually good. The meninges rarely become involved; and while the defect in the skull is usually not filled in with bone, but with connective tissue, this thickens and contracts as it gets older, and finally forms a fairly good covering for the soft parts below. Surgical intervention for the removal of the dead tissue is rarely required.

The case represented in Figs. 1 and 2 is an interesting example of gummatous periostitis and osteitis and its consequences, which I saw through the kindness of Dr. R. Wolf of this city. The patient was a Russian woman about thirty-five years old, and her history, obtained only with difficulty and in an unsatisfactory manner, may be summed up as follows:

She had had trouble in the scalp twelve years before; but she was ignorant of its nature, and gave no history of other syphilitic manifestation. So little inconven-

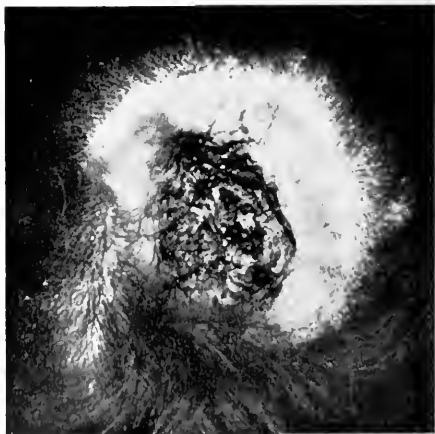


FIG. 1.

ience had it given her that she had no distinct recollection of its having been treated. After many months a flat piece of bone had come away, and in the course of time the ulceration healed, and she had no further trou-

ble. A few months ago, without known reason, trouble began in the scar. Ulceration began in the centre and slowly spread, and, though it caused her but little inconvenience, she finally sought medical aid.

Examination showed that an area of the scalp of circular shape, about two inches in diameter and situated over the two parietal bones at their posterior superior margins, was entirely hairless, and was, in fact, a dense mass of white, adherent cicatricial tissue. In the centre of this was a large, oval, dark-brown, and greenish crust, from the edges of which pus welled out on pres-

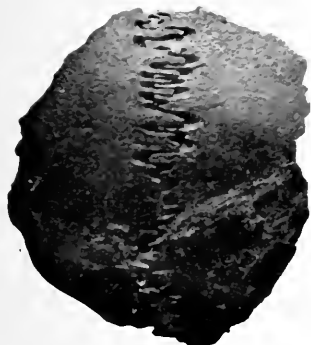


FIG. 2.

sure. She positively refused to permit this crust to be removed, and no examination of the subjacent ulceration could be made. There could be no doubt, however, either as to the nature of the process or the condition under the crust. The patient was suffering from a recurrence of guminous inflammation in the scar; and the condition of the sequestrum from the old inflammation showed that the process must have reached very close to the meningeal membranes.



FIG. 3.

This sequestrum the patient exhibited with a good deal of pride, stating that she had earned it as a pocket piece, for good luck, ever since it had come away. It consisted of an irregularly oval and curved piece of bone, measuring two inches and a quarter by two inches. It was evidently composed of two adjacent portions of the posterior upper parts of the parietal bones, the post-

tal suture dividing them in the middle line showing beautifully. The upper convex surface showed the outer table of the skull intact. The under concave surface was composed mostly of cancellous tissue; only along the middle line at each side of the suture the inner table was present, and here, of course, the entire thickness of the skull was lost.

The course of the disease after treatment was instituted was quite uneventful. The suppuration stopped, the scab gradually became detached, the ulceration healed, and the parts returned to their former condition. The patient insisted on keeping her piece of bone.

The point of interest in the case is the demonstration of the fact that very extensive destruction of important tissues can take place in syphilis without any systemic reaction or even much personal discomfort. The first attack of osteitis had destroyed, in places, the entire thickness of the skull, and had necessarily exposed the meninges; yet the inflammation had not spread to those membranes, and the patient had not thought herself sick enough to be under medical care. Pain, after all, is the chief of the subjective symptoms; and its almost entire absence is responsible for the extent of the lesion that I have described.

AN

INTERESTING CASE OF HYDRONEPHROSIS.

By JOHN S. PYLE, M. D., LL. B.,

TOLEDO, OHIO.

THE accompanying illustration is a reduction from a photograph of an enormous kidney which I removed from an unmarried woman in the month of June, 1898. The case is one of interest because of the size, the almost negative history, and the probability of one mistaking the growth for an ovarian tumor. The diagnosis of an ovarian growth had been repeatedly made before the patient came under my observation, and, on two occasions, the common mistake of pregnancy had been made. The latter, of course, was hardly excusable; for, aside from the abdominal enlargement, there were no other signs of this last-named condition. On the other hand, it was impossible to say that the growth was not ovarian. The enlargement occupied the middle of the abdomen and extended below to the brim of the pelvis and above to the epigastric region. The patient, however, spoke of noticing a right-sided development high up and in the lumbar region; but as there was no history of well defined pain and symptoms of renal complication, this circumstance was not regarded as throwing much light upon a possible diagnosis. The tumor could be easily outlined, and, while the shape was that resembling a kidney, its unusual size and central position made the diagnosis a matter of doubt. In operating I chose the median line as the most suitable place to make the abdominal opening. After being done, I was soon apprised of the extent of the abnormal condition, and, in a matter of minutes, the specimen was in the anterior abdominal wall. I will now describe a brief opening in the peritoneum, and then state the nature and extent of the growth. The incision was made along the upper border of the rectus abdominis. The greater curvature of the stomach was drawn up to the incision, and represents the tubercles and is a typical case.

fire right lumbar and portions of the right hypochondriac and iliac regions, extending from and approximating the under surface of the right lobe of the liver to the brim of the pelvis, filling the right iliac fossa. The lesser curvature of the growth illustrated is nothing but



the distended pelvis of the kidney, and was that portion which gave prominence to the abdomen and occupied the central region. The weight of the growth after removal was ten pounds.

The size of the growth was composed of the cortex of the kidney with a complete destruction of the secreting substance. It was filled with a rimous fluid of a light-specific gravity. The operation was performed at the Audin Hospital at Canton, Ohio, and was uneventful. The patient recovered, and is now enjoying excellent health.

2123 A GRAND AVENUE.

A NEW STAIN FOR THE BACILLUS TUBERCULOSIS.*

BY MARION DORSET, M. D.

[Communicated from the Bacteriologic Laboratory, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C.]

There is a percentage of fat present in the bodies of tubercle bacilli which was first noted by Hammerschlag, Schmitt, and de Schweinitz and the writer, in the course of their recent chemical study of the tubercle bac-

cillus which is being carried out in this laboratory under the direction of Dr. de Schweinitz, found that the dried bacilli often contained as much as forty per cent. of ether soluble material. Reports upon some of the results so far obtained in the above-mentioned work have already been published by de Schweinitz, or de Schweinitz and Dorset, in the *Journal of the American Chemical Society*, 1895, 1896, and 1898, the *Centralblatt für Bakteriologie u. Parasitenkunde*, and in bulletins from this department.

In pursuance of a suggestion made in one of these earlier publications, that the large amount of fatty material in the tubercle bacilli probably accounted for the difficulty experienced in staining the bacillus with the ordinary dyes, an effort was made by the writer more than a year ago to stain them with some of the ordinary dyes after the preparations had been extracted with ether and alcohol for varying lengths of time. The results obtained, however, were not satisfactory.

Shortly afterward my attention was called to the statement that sudan iii was a useful stain for fat in histological and pathological work, and it was immediately tried upon preparations of the tubercle bacilli. This dye is insoluble in water, soluble, however, in alcohol with a red color, also in the various essential oils, in chloroform and xylol. Fat once stained with this material can be decolorized with difficulty. Dadd,* who first suggested the use of sudan iii in histological and pathological work, recommends that Müller's fluid and glycerin be used in hardening and fixing the tissues, and that absolute alcohol should not be used as a dehydrating agent, nor should the specimen be cleared in the essential oils or xylol nor mounted in Canada balsam. After trying various strengths of solutions of sudan iii in alcohol, it has been found that the following methods give the most satisfactory results:

I. *Staining of Tubercle Bacilli in Pure Cultures.*—Cover-glass preparations were made and fixed in the ordinary way and then immersed in a cold, saturated eighty-per-cent. alcoholic solution of sudan iii for five minutes. The excess of stain was then removed by washing in several changes of seventy-per-cent. alcohol for five minutes. The results obtained were very satisfactory, and the characteristic appearance of the tubercle bacilli could be very readily noted. The bacilli are stained somewhat better if left in the sudan iii for ten minutes and then washed in the seventy-per-cent. alcohol. The germs are found stained a bright red and the beaded appearance is very distinct. Cultures of the bovine tubercle bacillus, and also of the tubercle bacillus obtained from swine, treated with this dye, were not apparently as well stained as in the case of the bacillus of human origin. These results should be verified, however, and further work with these and tubercle bacilli

*Landerer paper presented at the American Public Health Association, held at Springfield, Mass., 1896, by Dr. E. A. de Schweinitz.

* *Arch. ital. di biol.*, vol. xxvi, p. 143, 1896. Original paper in *Giornale di R. Acc. di medicina di Torino*, No. 2, 1896.

Tuberculosis.
Pure culture. Human.



Section from a tuberculous lung, human,
showing tubercle bacilli in
bronchial exudate.



Tub. Bacilli
in sputum, stained in Sudan III. Counter
stained with methylene blue.

DR. DORSET'S ARTICLE ON BACILLUS TUBERCULOSI



from various sources is in progress. The human tubercle bacilli stained with sudan iii are not decolorized by washing for two minutes with dilute one-to-twenty-five sulphuric, hydrochloric, or nitric acid, or ammonia.

II. *Staining of Preparations from a Gland of a Tuberculous Guinea-pig, and from Sputum, which had been proved to Contain Tubercle Bacilli.*—The preparations were fixed as usual and immersed for ten minutes in a saturated eighty-per-cent. alcoholic solution of sudan iii. They were then washed from five to ten minutes in seventy-per-cent. alcohol. Upon examination the tubercle bacilli were found to be stained a distinct red and presented the characteristic appearance. No other bacilli present in the sputum had been stained by the sudan iii, though they were evident in quantity when the preparation was counterstained with methylene blue. The tubercle bacilli still retained their characteristic red color and appearance.

III. *Sections of a Tuberculous Lung.*—Sections from the lung of a man who died of bronchial tuberculosis* were stained from five to ten minutes in a concentrated eighty-per-cent. alcoholic solution of sudan iii washed from five to ten minutes in several changes of seventy-per-cent. alcohol, counterstained with methylene blue, dehydrated with absolute alcohol, cleared with clove oil, and mounted in Canada balsam. In this preparation the tubercle bacilli were stained red and could be distinctly seen lying in the tissue. The material from which the sections were made was prepared in the following way: Pieces of the lung were placed in absolute alcohol and allowed to remain for a week, then changed into a fresh lot of alcohol, and from that passed through alcohol and ether into celloidin in the usual way. The sections after staining were also dehydrated with alcohol, but in spite of this fact the tubercle bacilli were well stained by sudan iii. It is thus evident that their staining properties are not influenced by the dehydrating action of the alcohol. This differs from the method prescribed by Daddi in staining sections for fat, as he recommends that care should be taken not to dehydrate with alcohol or clear with clove oil. Possibly the fatty material in the bodies of the tubercle bacilli is not as soluble as that deposited in the tissues. It should be noted, however, that preparation stained with sudan iii and mounted in Canada balsam did not retain a bright color after a month's time.

To demonstrate further that sudan iii is apparently a selective stain for tubercle bacilli, I endeavored to stain the numerous varieties of bacteria found in decaying sputa, pure cultures of bacilli, cholera, glanders, phoid, anthrax, symptomatic anthrax, diphtheria, and prodigious bacilli, the sporillum of *Vibrio cholerae*, and the *Staphylococcus pyogenes aureus*, with no effect. Preparations of the smegma bacilli were also

made, but did not stain with sudan iii, although they were stained with carbol fuchsin according to the ordinary method. In a mixed preparation of tubercle and smegma bacilli, stained with sudan iii and well washed with seventy-per-cent. alcohol, the tubercle bacilli appeared characteristic, while the smegma bacilli remained unstained, although this same preparation, when subsequently stained with carbol fuchsin, showed smegma bacilli present in abundance. It would appear from the results so far obtained that sudan iii may be considered as a selective stain for tubercle bacilli, and that this selective action is due to the large amount of fatty material present in the body of the germ. When stained with sudan iii the characteristic beaded appearance of the tubercle bacilli is very distinct, and, as has been suggested, this beaded appearance in the staining is probably due to the droplets of fatty substance present in the body of the germ. Although smegma bacilli stain very readily with carbol fuchsin, similarly to the tubercle bacilli, the fact that the smegma bacilli do not stain with sudan iii would indicate that their cell substance is very different from that of the tubercle bacilli.

The practical value of sudan iii as a stain for tubercle bacilli will be recognized where a rapid method is desired for staining the organism in tissues and for the purpose of differentiating without trouble between smegma and tubercle bacilli in cases, as in urinary sediments, where the smegma bacilli might be present, and throw some doubt upon a positive identification of the tubercle bacilli by the ordinary method of staining. The method takes about the same length of time as the carbol-fuchsin method for cover-glass preparations, but as the stain is apparently a selective one for tubercle bacilli, it appears to be well adapted for routine work.

August 18, 1898.

PRELIMINARY REPORT ON THE RESULTS OF BLOOD EXAMINATIONS AT CAMP WIKOFF.

AUGUST AND SEPTEMBER, 1898.

By JAMES EWING, M.D.

(Continued from page 148.)

PARASITOLOGY. 1. *Pl.* *Pl.* *Pl.* *Pl.* *Pl.* *Pl.*

The earliest forms of this parasite were small, rounded, bilobed, and contained a single nucleus. In the later stages they showed slight change of shape, becoming more elongated. At the same time they became more numerous, and the nuclei were more distinct. Small, evenly stained, and rounded bodies were also seen. At the same time the number of these bodies was greatly increased. The bodies were small, rounded, and contained a single nucleus. They were also seen in the blood of the same patient. The bodies were small, rounded, and contained a single nucleus. They were also seen in the blood of the same patient. The bodies were small, rounded, and contained a single nucleus. They were also seen in the blood of the same patient.

* The material was kindly furnished by Dr. Carroll of the Army Medical Museum.

blunt points. These bodies usually exhibited an active, rolling motion, but were sometimes sluggish, when they were seen to assume the form of the intracellular, spheroidal bodies.

During nearly all periods of the first two, or sometimes three, days after sporulation, the peculiar signet-ring form of the parasite was seen in the red cells. In the fresh condition this body appears indistinctly vesicular, is slightly amoeboid, and, especially in virulent infections, was wont to extrude short globular pseudopodia. In stained specimens, in cells flatly spread and instantly dried, this typical body has the appearance of a signet-ring, a quarter to two thirds the diameter of the red cell, the thickened portion of the ring, or signet, being usually very prominent, and the bow of the ring being exceedingly thin. It may exhibit one or more minute achromatic points, and one small deeply staining granule. There seems little room for doubt that this form of the parasite is really of the form of a ring, and not, as is sometimes stated, spheroidal with an achromatic centre.

The growth of the signet-ring body in the circulation appears to be slow, as they were usually seen of slightly increased size for two, and in six cases for three, days after sporulation (162, 500, 612, 646, 681, 782).

The largest signet-ring form seen in the present series were about four to five micromillimetres in diameter. They were almost invariably non-pigmented, but occasionally one or two fine pigment grains could be seen scattered along the periphery of the ring. Their position, projecting beyond the outline of the red cell, or apparently applied to the surface of the cell, is often characteristic.

The signet-ring form of the aetivo-autumnal parasite was readily distinguished from the early ring-shaped form of the tertian parasite on the following features:

(1) The tertian ring never shows a distinct signet on one side and an extremely fine, regular bow on the other, but is thicker and more irregular.

(2) The tertian ring very early exhibits a distinct spheroidal achromatic portion, which is absent or extremely minute in the aetivo-autumnal parasite. (Alcoholic eosin and methylene blue.)

(3) The tertian ring early produces many fine pigment grains, which are late and infrequent in the aetivo-autumnal ring.

(4) The red cell is usually shrunken when infected by the aetivo-autumnal ring, and nearly always swollen when harboring the tertian parasite.

The diagnostic value of a close scrutiny of these signet-ring form was strikingly illustrated in a case of quotidian aetivo-autumnal fever (338) in which, in the same red cell, two rings were found; one, three micromillimetres and a half in diameter, developed in a paroxysm, occurring thirty hours previously, and a second one, a micromillimetre and a half in diameter, coming

from a paroxysm about six hours before the examination of the blood.

In another case (67) of double infection, young crescents were found with great difficulty, but rings of both types were abundant, and readily distinguished on the above features. Later, adult forms of both varieties were seen.

After the second or third day, or in cinchonized cases often much earlier, the signet-rings usually disappear from the circulation, and their further development proceeds, if at all, in the viscera, especially in the brain, marrow, and spleen. In these situations the growth of the parasites may be followed in smears of the tissue made on glass slides and treated as blood specimens. In such specimens most of the later forms of the parasites can be seen simultaneously. Besides the rings, tissue smears usually contain many spheroidal, hyaline, pigmented, intracellular bodies, three to five micromillimetres in diameter. These bodies are probably the next developmental stage beyond the rings, but the gap between the ring form and the spheroidal pigmented body is very wide, and their supposed relation can not at present be claimed with certainty. From the pigmented spheroidal body all transition forms up to adult *crescents* are to be seen in abundance. Small pigmented spheroidal bodies were seen in the circulation in one fatal case of the present series (67), but are rare in the peripheral blood. From the third to the fifth day after sporulation *elliptical intracellular bodies* begin to make their appearance in the circulation. From the fourth to the sixth day crescentic forms are usually to be found, and thereafter in cinchonized cases, only adult or nearly adult crescents are usually to be seen. All these later forms are abundant in marrow smears.

The *segmenting forms* of the aetivo-autumnal parasite are almost never seen in the circulation, and were only once encountered there in the present cases. In the marrow smears from a fatal case (793), however, many aetivo-autumnal rosettes were seen. In eight of these the spores could be accurately counted, and their number was invariably eighteen. These rosettes were slightly smaller than the tertian rosette, a difference apparently due to the smaller size and lesser number of the spores. The pigment, composed of coarse, brownish-yellow grains, was usually centrally placed. Distinct remnants of the fib of the red cell were usually seen surrounding the rosettes.

In regard to the time required for the fertile cycle of the aetivo-autumnal parasite, the writer secured no evidence that it can transpire in the period usually ascribed—viz., forty-eight to seventy-two hours. In cases of quotidian and tertian fever from this infection, there was no indication that the new brood of parasites had developed from the generation of one or two days preceding, the larger signet-ring forms of these generations being usually still present in the circulation.

Moreover, the slow development of the ring forms, and the wide morphological gap between them and the rosettes, make it appear extremely improbable that the change from large signet-rings to rosettes could occur in less time than is required for the development of large rings from spores, which in six cases was found to extend over forty-eight hours.

It is possible, however, that the inhibitory influence of quinine may so retard or disturb the cycle that no reliable observations on this point were possible in the Montauk cases. It is possible also, though improbable, that the cycle in secondary paroxysms differs from that in primary seizures, very few of which were seen at Montauk.

With these possible sources of fallacy, it is the conclusion of the present study that the fertile aëstivo-autumnal cycle may require much longer than forty-eight hours, and that sterile forms are not fully developed until the end of six or seven days. Clinically, a great many cases showed characteristic attacks lasting seven days, followed immediately by relapses of equal duration. The periods given above for the appearance of various forms of crescentic bodies were verified by so many observations that the writer is convinced of their accuracy. Adult crescents appearing in the circulation before the end of the fourth day of the cycle are probably to be referred to a preceding generation of parasites.

2. *The Tertian Parasite.*—The earliest forms of the tertian parasite seen in the blood of the present cases were, as is usual, small, spheroidal, non-pigmented, intracellular bodies, slightly larger than the similar forms of the aëstivo-autumnal parasite. In all cases in which such forms were seen, larger and typical tertian rings were also found. The spheroidal, achromatic portion, which characterizes the tertian ring, develops with the increasing bulk of the parasite until, in the adult forms, it measures two to three micromillimetres in diameter, and exhibits a faint reticulum.

In the tertian presegmenting forms, the reticulum of the body of the parasite becomes very distinct, staining deeply with methylene blue, and at this stage the single achromatic portion appears to subdivide, and is found in the meshes of the reticulum.

The usual development of the tertian parasite was followed in many cases. In one particular, the Cuban tertian parasite appears to differ from that seen in the New York cases. In two fatal cases (130, 559), and in several very severe tertian infections, the parasites were much more actively amoeboid than the writer has ever seen in cases of New York malaria. On this account, in stained specimens, the pseudopodia of the larger parasites were extremely long and numerous, so that in some cells the body of the parasite was represented by a series of small blue grains between which no marking threads could be distinguished.

3. *The Quartan Parasite.*—In only four cases of the

series were organisms found which probably belonged to the quartan type. These cases responded promptly to quinine. The histories were not of typical quartan seizures, and, as the paroxysms were not repeated, the diagnosis could not rest on the clinical records. In these cases the organisms were highly refractive and slowly amoeboid in the fresh condition; the cells were shrunken and the pigment unusually coarse in stained specimens. No chills were observed, and no rosettes seen in the blood. The cases were therefore classified as those showing no organism that could be positively identified.

4. *Atypical Organisms.*—In most of the cases classified as showing no parasites that could be positively identified, atypical, intracellular, pigmented bodies were found.

Such bodies are to be distinguished from (1) bluish staining masses, often seen in the red cells of any secondary anemia; and (2) from blue-stained foreign bodies lying in or on the red cells, which often simulate the malarial organism. Aside from these possible sources of error, in well-established cases of malaria after much quinine has been taken, one frequently meets with shrunken atypical "quinine organisms" usually containing one or more pigment grains. They are usually irregularly spherical in outline, and the infected cell should always show some alteration in size, form, or hemoglobin.

While such bodies do not constitute evidence on which the positive diagnosis of malaria may be based, the frequency of their occurrence in undoubted cases of malaria at Montauk leads the writer to believe that their significance is greater than the conservative blood-analyst would naturally admit.

Vacuolated, pigmented and non-pigmented, extra cellular bodies were seen in many cases. This group does not include the adult tertian parasite, which in the fresh condition usually appears to be free from the cellular remnant almost invariably demonstrable by staining, nor the large sterile homogeneous forms showing pigment in vibratory motion.

In the fresh condition the appearance of the cystic extracellular bodies strongly suggests an origin from malarial parasites.

In rare instances sluggish amoeboid motion may be observed, in which case their malarial origin can not safely be denied, although pigmented leucocytes sometimes show amoeboid motion.

On the other hand, cystic leucocytes are very common in malaria. They were noted in every case examined in the fresh condition at Montauk. When these cystic leucocytes contain pigment, as they not infrequently do, it appears to the writer impossible to distinguish them from the bodies described by some as extracellular forms of the malarial parasite.

In stained specimens none of the cystic leucocytes were seen in the present cases, but in the entire series the writer met with no instance of this type which

could be regarded as extracellular forms of malarial parasites. All suspicious vacuolated, pigmented, extracellular bodies gave evidence of their origin from leucocytes, and the conclusion was reached that in the absence of typical amoeboid motion, or vibratory motion of pigment, the identification of these bodies is extremely hazardous, and that the diagnosis of malarial parasites should not be based on their presence alone.

Pigmented leucocytes were noted in a large proportion of the specimens examined, and proved to be one of the most striking characters of the blood in nearly all forms of malaria. The pigmented leucocytes were usually of the large mononuclear variety. Some of them had englobed not only pigment, but the bodies of parasites, and were themselves often cystic. In one case (67) very large macrophages, thirty-five to forty micromillimetres in diameter, were found in the circulation.

The pigment was usually coarse and brownish-yellow in the aëstivo-autumnal cases, and slightly finer and darker in the tertian cases. In old cases all pigment appears to assume a much darker color. It occurs in small rods or grains, either scattered through the body of the cell or gathered in masses of considerable size. In typical form these leucocytes were unmistakable, but when scanty in number and containing only one or more small black grains, they had to be distinguished with care from leucocytes contaminated during the preparation of the specimen.

Pigmented leucocytes were most abundant in well-established cases of aëstivo-autumnal fever. The largest numbers were seen in a fatal case of double infection (67). Their recognition proved of great diagnostic value in (1) *chronic malarial fever*, when they were often found after all trace of parasites had disappeared, and (2) in cinchonized cases of more acute fever, in which plasmodia could not be found. In the later stages of aëstivo-autumnal fever pigmented leucocytes were many times found in five to ten minutes, while the discovery of a crescent required an hour or more.

Free pigment, probably of malarial origin, was seen in many cases, but never in the absence of pigmented leucocytes.

Occasionally red cells were found to contain pigment similar to that seen in the leucocytes, but no trace of a parasite.

The Occurrence of the Plasmodium in the Circulation.—The plasmodium was found in the blood in every case in which the blood was secured within eighteen hours after the chill. In only one case (156) was the organism not found twenty-four hours after the chill. Scarcely half of the cases had taken heavy doses of quinine, many of them for several days before coming under observation. In the great majority of the cinchonized cases of acute aëstivo-autumnal fever organisms were found if the blood was examined within a week after the beginning of the paroxysm, while crescents frequently

persist for ten, or sometimes for fourteen days, or longer.

As previously stated, there was a period noted in several cases between the second and fourth days, when large doses of quinine had completely rid the blood of the signet-ring forms, and, in the absence of crescents, the examination proved negative.

On the other hand, a prolonged search was often required before the organisms could be detected. In three cases examined during the chill, thirty-five, forty-five, and fifty minutes were required before a single signet-ring form could be detected, and in nine other cases only crescents could be found (fifteen minutes' search) during the chill.

In four cases examined twelve to eighteen hours after the chill, the discovery in one of a single tertian parasite required thirty minutes, and in three, sixty and seventy minutes were required for the detection of one signet-ring form.

In one case examined twenty-four hours after the chill one signet-ring form was found after a search of two hours and ten minutes. In another case (456) two hours' search was unsuccessful, although atypical pigmented intracellular bodies and pigmented leucocytes were seen. A second specimen could not be secured.

The conclusion is drawn from these data that the parasite can always be found if the blood is examined with care and persistence within twenty-four hours after the beginning of the chill, although quinine may have been administered in large doses.

In thirty cases of *remittent malarial fever*, selected as showing fairly continuous pyrexia, rings alone were found in eight; crescents alone in eleven; both rings and crescents in one; tertian parasites alone in one; double infection in one; and no distinct organisms in eight.

In many other cases a continuous pyrexia lasting three to seven days was noted, but these cases did not seem to fall properly within the class of remittent malarial fever.

In chronic cases, during febrile periods, organisms were usually found in the blood, but they were often missed during afebrile periods. In one case (507), exhibiting an irregular fever, crescents were found four weeks after the last chill, quinine having been constantly administered. In another case (310) young crescents were found three weeks after the last chill, in spite of the use of quinine. It is probable that mild seizures had been overlooked by these patients.

Typhoid Fever and Malaria.—In sixty-nine cases giving a distinct history of recent malarial fever and exhibiting similar evidence in the blood, in the form of severe anaemia, pigmented leucocytes, often atypical pigmented intracellular bodies, and in some cases a few plasmodia, the question of a double infection with typhoid fever and malaria had to be considered.

Of these, forty were reported as cases of *typhoid fever in anæmic and malarial subjects*. In some of

these cases the disease began with one or more short rigors repeated on successive days, after which the disease progressed with the usual symptoms of typhoid fever. In one such instance (791) tertian parasites were found during the first few days and before typhoid fever was suspected, but they disappeared rapidly under quinine, and were not again seen. The patient died from peritonitis in the fourth week.

In another case (514) the usual history of Cuban malaria was interrupted by the development of typhoid fever with all essential symptoms. Plasmodia could not be found in the blood, but in the second week of convalescence tertian chills and fever developed, and tertian parasites were found in the blood.

In a third case (683) the history indicated the slow onset of typhoid fever in Cuba, which was safely withstood without quinine, but in the second week of convalescence tertian chills and fever supervened and tertian parasites were found in the blood.

There were other cases (1, 3, 51, 115, etc.) illustrating the same behavior of the malarial infection during the course of typhoid fever.

Further evidence of the usual incompatibility of malarial and typhoid fevers was furnished by the two fatal cases of typhoid fever in malarious subjects that came to autopsy (523, 683). There no parasites could be found in the blood during life, but in smears from the spleen and marrow diligent search revealed the presence of a very few rings and crescents, with much old malarial pigment.

The reason why the blood was examined in a hundred and fifty-nine cases of typhoid fever was the intermittent character of the fever, which was exhibited in patients both with and without malarial antecedents. *In no case of undoubted and established typhoid fever were malarial parasites found in the blood in connection with any of these sudden rises of temperature, but only at the onset of the disease or during the convalescence.*

On the other hand, many patients whose blood contained numerous parasites were seen in the "typhoid state," but there were always some essential symptoms lacking to confirm the diagnosis of typhoid fever, while the subsequent course of the disease, where observed, demonstrated the purely malarial character of the fever.

These patients might suffer from epistaxis, hæmatemesis, bloody stools, tympanites, a few rose spots, though oftener herpes, diarrhoea, and delirium, and in some a partial Widal's reaction was obtained. But the intestinal symptoms were inconstant or referable to dysentery or simple diarrhoea, from which many of the malarial cases suffered, and these patients never showed subulnus or cracked tongues, and they did not die, or, if they did, dysentery and malaria were demonstrated at or before the autopsy.

In another group of twenty nine cases, the absence

of any large number of parasites, and the presence of typhoid symptoms, left a reasonable doubt regarding the diagnosis.

These cases seemed almost certainly malarial, on account of the previous history, the facies, the anemia, and usually the sudden recovery at the turn of the disease, while in seven of them a few parasites were found in the blood.

On the other hand, the suspicion of typhoid fever was raised by the continued fever, abdominal symptoms, and general typhoidal state, although symptoms of typhoid fever were not present in distinct and convincing form. A moderate reaction with Widal's test was sometimes obtained in these cases, but this evidence failed to be convincing after sharp reactions had occurred in a case of dysentery (269) and in a cinchonized case of pernicious malaria (328).

It is possible that some of these patients suffered from both active malaria and typhoid fever, but there were no positive indications that the latter infection was present. In the cases that came to autopsy there was never any doubt of the nature of the disease. It was either typhoid fever or malaria, but never both, although microscopical evidence of dormant malarial infection was found in at least two cases of typhoid fever.

In short, in spite of very painstaking effort, the attempt to find a case of typhoid fever and active malaria progressing simultaneously was unsuccessful.

From the study of this group of cases it is concluded:

1. That typhoid fever is to a large extent incompatible with active malarial fever, and that during the course of the former the latter infection is usually suppressed.

2. That the presence of old malarial infection may alter the course of typhoid fever through the anemia, but that active sporulation of the malarial parasite very rarely occurs during the course of established typhoid fever.

3. On the other hand, since malarial paroxysms often reappear during convalescence, a scanty growth of the parasite must often persist during the course of typhoid fever, and it is possible that some of the irregularities of temperature observed in these cases are referable to this partly suppressed growth.

4. That the anatomical evidence of a post-mortem examination is much needed to demonstrate the existence of typhoid fever in cases showing active malarial paroxysms.

Measles and Malaria.—During convalescence from measles, symptoms of malaria developed in two cases, and parasites were found in the blood, crescents in one case and tertian organisms in the other.

The eruption in these cases had been characteristic, but the course of the disease had not apparently been altered by the activity of the malarial infection.

THE ELECTRIC-ARC BATH.

A CLINICAL REPORT.

By MARGARET A. CLEAVES, M.D.

(Concluded from page 122.)

CASE I. *Acute Phthisis*.—E. M., a man, aged twenty-eight years; married; carpenter. January 23, 1897.

Patient presented himself because of cough, with pain in chest, following a malarial attack last summer. Now has constant cough, muco-purulent expectoration, night sweats, cachexia.

Inspection: Skin pale and white; emaciated; clavicle and ribs conspicuous; retraction of chest walls, with impairment of motion in infraclavicular spaces; heart beat in normal position, accelerated.

Palpation: Vocal fremitus increased at right apex.

Percussion: Marked dullness over right apex, extending to fifth interspace.

Auscultation: Broncho-vesicular breathing, sibilant and subcrepitant râles over right apex. Increase of vocal sounds. On left side very harsh inspiration and broncho-vesicular expiration. Pulse, 100; temperature, 100.2°; weight, a hundred and twenty-one pounds and three quarters.

Treatment: Electric-arc bath; exposure from twenty to thirty minutes; temperature of bath, 90° F. Five treatments given, extending over a period of two weeks. At second visit "more life and energy and felt like getting around," before "felt like sitting about"; appetite better; cough diminished. At time of the third visit, further diminution in cough; sputum less purulent. At the fourth visit cough was much diminished, strength increased, a sense of well-being.

Improvement maintained; no night sweats while under care, save night following first treatment; improved color; gain in weight, two pounds and a half. The patient through whom he came to the clinic reported, two weeks later, continued improvement, and that he had gone to work again. Subsequent history not known. Two specimens of sputum were secured and examined, but the *Bacillus tuberculosis* was not found. Examination not regarded as conclusive.

CASE II. *Chronic Phthisis*.—J. B., a man, aged forty years; married; plate printer. December 28, 1897.

Has worked in a plating factory (bronze) for eight years. Onset sudden; began to cough and expectorate muco-purulent matter November 1, 1891. Condition has persisted for past six years; morning cough and almost daily expectoration. For past seven months dyspnoea on exertion; evening temperature. Under medical care for five years; thinks he is no worse than one year ago, save increased dyspnoea. Has had three tubercular ulcers (laryngeal); two disappeared under treatment, third remains. No history of consumption in the family.

Physical Examination.—Inspection: Emaciated; waxy skin; marked dyspnoea; incessant cough; impairment of motion in infraclavicular spaces; clavicles conspicuous; heart beat accelerated; respirations more frequent than normal.

Palpation: Skin warm and dry; increased vocal fremitus both upper lobes, especially right.

Percussion: Marked dullness upper lobe, right, less marked on left.

Auscultation: Increased vocal fremitus both upper

lobes; cavernous breathing on right; subcrepitant râles right lower lobe posteriorly; friction râle on left, low down.

Examination of sputum: *Bacillus tuberculosis* found.

Treatment: Electric-arc bath; exposure thirty-five minutes; temperature, 90° F.

Twenty treatments given, extending over a period of seven weeks and a half. At first visit, incessant cough from time of entering clinic room up to going into bath. Just before conclusion of bath marked moisture of the palms, hands, and forehead observed.

Sensation of bath pleasant; coughed but once during its continuance, and not but once for twenty-five minutes afterward. Two days later, at second visit, stated that he had coughed less since treatment than during the same time for two months previous.

At conclusion of second treatment hands and forehead moist as before; no cough; freer and easier respiration during bath.

At the third visit reported less dyspnoea. At the fourth visit, January 6, 1898, no cough night of previous treatment, January 4th; once night of 5th; not at all during day of 6th. Rate of respiration diminished from 40 before first treatment to 30.

At the fifth visit, eleven days after coming under care, dyspnoea diminished; able to walk several blocks without getting out of breath.

Expectoration of a saltish taste instead of sweetish as before, more nearly normal in color, contained less purulent matter.

At the sixth visit, two weeks from beginning of treatment, had an irritative cough, with discharge from posterior nares. Walked ten blocks two days previously; dyspnoea slight; expectoration decreased; color of skin improved; sleeping better; no cough while at clinic, an hour and a half; laryngeal ulcer healed; throat much less anæmic. Throat examined January 10th at Throat Clinic, New York Polyclinic, healing of ulcer also noted.

At the first six visits the electric-arc bath alone was used.

Beginning on the seventh, and for the remaining fourteen treatments it was followed by Franklinian current, positive insulation, convective discharge with crown electrode, ten minutes, and with brush electrode to entire general surface (nutritional) localized to chest walls front and back (lungs), five minutes.

During seventh bath no cough. Three and a half weeks after coming under care increased strength; brighter facies; better color; eyes not so preternaturally bright. Improvement continued, characterized by diminished cough, expectoration, improved appetite and sleep. On January 18th nasal and throat examination revealed hypertrophic rhinitis and pharyngitis. For this two applications of intranasal cupric electrolysis were made at intervals of nine days. About the 1st of February for a day or two appetite not good; cough slightly increased. Sputum examined on admission to clinic two weeks later, and again at end of four weeks; *Bacillus tuberculosis* found in every instance; fewer in the field at last examination.

At no time while under treatment did patient have special nursing and exceptionally sufficiently nourishing food. This was especially true during the month of February. February 23d admission was obtained to St. Luke's Hospital in order that he might have care and nutritious food during the trying weather of the spring months. For the first eleven days gained five pounds,

which he lost in the next ten days. Three weeks after entering hospital complained of sore throat. Examination revealed two tubercular ulcers on laryngeal cartilages. In the hospital until April 1st; unable to swallow food; discharged April 1, 1898. Returned to clinic April 7, 1898. Emaciated; extreme pallor; dyspnea, and exhaustion. No physical examination made because of the patient's great exhaustion, but the following treatment was given: Frankline current, positive insulation, convective discharge, chain in hands, with crown electrode, fifteen minutes, and with brush electrode to the entire general surface (nutritional), localized to the chest walls, front and back (lungs), and over laryngeal region (ulcers), ten minutes.

Patient felt brighter and stronger after treatment, dyspnea lessened, improved circulation, return of color to face, able to get down stairs more comfortably. The query naturally rises, Might not the improvement established have maintained itself if the patient could have had continued treatment while in the hospital, where food and care were provided? It is impossible to answer the question now, but it seems reasonable to believe that under proper conditions the continuance of the treatment would have led to better and more permanent results. This patient was living a month since (about August 7th) and up and about. Owing to change of residence can not ascertain his condition at this writing. For several years he had been given creosote, nor was it discontinued when he came under care, on account of his desperate condition. The relief obtained, however, was coincident with the establishment of his treatment by means of the electric-arc bath, and progressive under its use.

CASE III. Acute Phthisis.—B. B., a woman, aged thirty-five years, single; seamstress. January 4, 1898.

Patient had *la grippe* five or six years ago; pleurisy four years ago, and since then when she takes cold suffers pain in breathing, left side. In May, 1897, contracted a severe cold; tired; pains all over body; knees, ankles, and hands stiff; in hospital eight days; improved. Has not been fully well since; now pain and stiffness in shoulders, arms, fingers, and feet; badly nourished; constipated. For malnutrition and rheumatism the following treatment was given: Frankline current, negative insulation, disruptive discharge, sparks long, clean, and percussive to entire general surface (nutritional), localized to affected joints (pain and disability), and to lumbar and sacral plexuses, hepatic area and abdominal walls (constipation). Eighteen treatments were given, extending over a period of four months, establishing marked nutritional gain, with great relief from pain and stiffness and constipation.

Patient discontinued regular attendance April 2, 1898.

On April 16, 1898, returned, complaining of sore feeling through chest, with mucopurulent expectoration. Usual treatment given, but could not remain for physical examination.

May 3, 1898.—Physical examination: Congestion of right lower lobe, difficult breathing; hard, dry cough, scant expectoration.

Treatment: Electric arc bath, exposure thirty minutes; temperature of bath, 90° F. Nine treatments given, covering a period of five weeks. Followed by treatment respiration freer and easier; appearance brighter. May 5th sputum examined, *R. B. C.* 100,000, *W. B. C.* 10,000, *L.* 10,000. At the second visit looked much better, less worn, no sense of oppression in breathing, chest

treatment, cough looser. Physical examination made at time of fourth treatment showed sibilant and sonorous râles, and elicited the fact of moderate expectoration. After fifth treatment patient felt stronger; coughed less. Continued improvement characterized by increased strength; more energy; diminished cough and expectoration, freer respiration. Clinic closed June 11th for summer holidays, therefore further treatment could not be given. Arrangements were made to send patient to the country under the auspices of an association for the relief of working girls, the subjects of tubercular troubles. Overfatigue and exposure to night air incident upon her going for the necessary physical examination by the physician of the association brought on an exacerbation of her trouble, and she did not leave the city until July 30th. On August 16th reported by letter from Franklin County, New York, that she had gained three pounds and was much better. Case to be followed up.

CASE IV. Acute Phthisis.—M. E. L., married. Came for consultation March 31, 1898. Family history good; no consumption; patient had systematically overworked in the active care of a large business concern; general health poor for several years; less well for a year past.

In the spring of 1897 began to cough, lost strength and flesh. In the same summer took a sea voyage and was absent from his business several weeks. Nutrition improved and cough diminished during this time, but soon after his return took cold, cough returned with loss of flesh and strength and increasing nerve irritability. In September he was seen by his physician and examined also by Dr. Delafield. Trouble was found at the apex of the right lung and bacilli in the sputum. Dr. Delafield told him he must give up his business and go elsewhere in order that he might be under suitable climatic conditions. The patient was very much averse to this, and decided that rather than give up his business interests and go away he would work as long as he could in order that he might provide in the best possible manner for his family and accept the inevitable when it came.

He did nothing during the winter and early spring, save to take cod-liver oil and hypophosphites. At the time he came under care, March 31, 1898, he was a good deal worn; nervously irritable; had lost, and was still losing flesh; coughed a good deal, especially in the morning and at night; wakened by cough between four and five in the morning; expectoration mucopurulent; appetite poor and sleep broken.

Physical Examination.—Inspection: Patient fairly well nourished. Clavicles and ribs somewhat conspicuous.

Palpation: No change in tactile fremitus.

Percussion: Slight dullness over upper lobe on right, front, and back. Note normal on left, front, and back.

Auscultation: Subapical râles, dry, and below clavicle on right over area of upper lobe. None, and breathing slightly bronchial; none heard from left.

Examination of sputum: *R. B. C.* 100,000, *W. B. C.* 10,000, *L.* 10,000.

In answer to his question as to whether or not he could hold on for long, the fact of value of treatment, whether natural or artificial, and the treatment was decided upon. He was advised to continue in work as long as he could, and the improvement of his condition was to be followed up. The improvement of his condition was followed up. He decided to place himself under my care, and to

ment was instituted on the same day. For the first fourteen days treatments were given daily, with the exception of the intervening Sundays.

Treatment consisted of the electric-arc bath; temperature of bath, 90° F., exposure varying from thirty minutes to an hour. There was an immediate diminution of the cough, with gradually diminishing expectoration. Improved appetite and sleep, and marked lessening of nerve irritability. At the end of the first week of treatment the patient had gained three pounds; cough was markedly diminished; sleep and appetite improved. Improvement continued, and two weeks from the day he came under care physical examination was negative, save for a slight increase of vocal resonance at the apex of the right lung. In an examination of the sputum two weeks and three days from the time of instituting treatment no bacilli were found. The gain at that time in weight was five pounds. Throughout the rest of April and during May almost daily treatments were given, Sundays excepted, and an occasional week day. In one instance only was there an exposure of an hour, and that at the request of the patient, to whom the bath was most grateful, but it was followed by unusually profuse perspiration with slight exhaustion. After that time fifty minutes was not exceeded, while the average time was forty-five minutes.

During the month of June and the first week of July an average of from three to four treatments a week were given. At the beginning of the fourth week he was directed to secure a third specimen of sputum for examination, but at no time, either in the night or morning, was he able to secure anything, though he carried a bottle in his pocket for this purpose for the following two weeks.

There was absolutely no cough or expectoration. Improvement in appetite and sleep continued, with a further increase in weight, entire disappearance of nerve irritability, and withal a general sense of well-being.

During the month of June his business necessitated his going into a new building, which had not fully dried out, and as a result he developed malarial symptoms. He had at different times in his life suffered from chronic malaria. At that time he was given an anti-periodic, which was the first and only medicine given him while under treatment. Cod-liver oil was not used, but as much cream was taken as he could digest.

In all sixty-six treatments were given, extending over a period of three months and ten days. In the second week of his treatment the electric-arc bath was omitted for three or four days, owing to an accident to one of the lamps which was not promptly repaired.

Following the arc-light bath the following was given: Franklinian current, positive insulation, convective discharge with the crown electrode, fifteen minutes, and with brush electrode to the entire general surface (nutritional), localized to chest walls front and back (lungs).

With the establishment of nutritional changes some three weeks after coming under care the disruptive discharge was used and the application made to the entire general surface. At the same time a hypertrophic rhinitis with hypertrophy of the posterior turbinated bodies was treated with cupric electrolysis.

The applications were made with a thin copper electrode having concavo-convex surfaces, by means of which an accurate localization of the oxychloride of copper was made directly over the turbinated bodies. Before instituting nasal treatment there was difficulty

in breathing, with profuse post-nasal dropping and constant hoarseness. These symptoms were of several years' standing. In addition to the nasal treatment a slow interruption of the induced current regulated to the patient's toleration was used by percutaneous applications to the throat—i. e., from side to side for five minutes, and from nape to larynx for five minutes, daily. As a result of nasal treatment nasal respiration became absolutely free, and post-nasal dropping stopped entirely.

To date there has been no return of these symptoms. The throat became very much stronger under the use of the induced current, with gradual disappearance of the hoarseness, which returned but once while under care, when, owing to a sudden change one late afternoon from the extreme heat prevailing, he took cold. He came to the office the following morning with an acute laryngitis, exceedingly hoarse, with almost a whispering voice. The usual treatment was given: Electric-arc bath, followed by convective discharge, and the application of the induced current to the throat.

He left the office at conclusion of treatment with practically a normal voice, and maintained his improvement.

His total gain in weight up to the end of the first week in July was eight pounds. He is a man of very slight build. He attended to his business every day, not losing an hour, save the hour spent in the office for the purpose of treatment. A note on the 6th of July, stating his inability to keep an appointment, ends with the remark "feeling fine." On the 9th of July, writing in reference to being away for his vacation, he stated that he was very well.

This patient has been given to understand that the maintenance of his improvement depends very largely upon himself, that every attention must be paid to all matters of hygiene, and that he must have outdoor exercise and sunshine. Realizing fully the nature of tuberculosis, it follows that if at any time his nutrition falls below par the bacilli are apt to become active and the trouble develop anew.

The positive results obtained in this case as well as the improvement obtained in cases of much longer standing are, to say the least, suggestive.*

CASE V. *Acute Phthisis*.—M. T., a woman, aged twenty-eight years, single; importer. July 9, 1898.

Father died of pneumonia; mother has chronic malaria; one brother died at age of six with "brain trouble." Patient not strong and always nervous as a child. Menstruated at age of twelve, usually pain for twenty-four hours before flow, duration four days, amount normal. Has occupied her present position for eight or nine years, and has overworked; meals irregular; for past four years much mental worry. Life indoors most of the time. Four years ago last February began to go to Paris twice a year to buy goods, since that time less strong; for three years tired all the time; unable to get rested; very nervous and has lost flesh during last two years. Last February took cold, nose and throat first, finally lungs.

Since then has had a cough, especially on retiring and rising; at intervals muco-purulent expectoration. Every two weeks since has had an attack of coryza with incessant sneezing and nasal discharge; malaise and great fatigue. At time of coming under care, morning and evening cough, worse in morning, wakens her, mu-

* November 25, 1898, the patient remains well.

cous expectoration, at times muco-purulent. Bowels constipated, micturition frequent. July 13, 1898, examination of sputum and *Bacillus tuberculosis* found.

Physical Examination.—Inspection: Patient poorly nourished; retraction of chest walls above and below clavicles, especially on right; skin inactive, pigmented in defined areas over sternum.

Palpation: Vocal tactile fremitus normal.

Percussion: Percussion note, anteriorly and posteriorly over upper lobe of right lung is of higher pitch and of shorter duration than normal. Note over left chest normal.

Auscultation: Vocal resonance increased over upper lobe on right subcrepitant râles below right clavicle; diminished breathing. Left side anteriorly sounds normal; posteriorly infrascapular region loud sonorous râles.

July 25, 1898.—Sputum examined and *Bacillus tuberculosis* found.

Treatment: Electric-arc bath; exposure twenty minutes to an hour. The shorter exposure was given on the hottest days. Free perspiration always established with improved color and rested appearance. At the end of the first five days cough markedly diminished both night and morning, expectoration decreased. For the first eight days treatment given daily except on Sunday; during the two weeks following treatment was administered daily with one exception, while the last week but three treatments were given.

August 5, 1898.—Physical examination: Skin of better color, less dry and harsh; respiration freer; volume increased.

Subcrepitant râles: no sibilant or sonorous râles. Percussion note improved. Sputum examined and *Bacillus tuberculosis* found.

At intervals of five days three applications of cupric electrolysis made to hypertrophied turbinated body, inferior left, five milliamperes, three minutes each. At the end of two weeks, in spite of the heat of the summer weather and continued application to business, there was a gain of one pound; improved appetite and sleep; general sense of well-being; no cough at night, rarely in the morning; scarcely any expectoration, save from the throat. Menstruations established August 1st, free from pain, very comfortable. Is to sail for Europe tomorrow, August 6th, to be gone five weeks. The following was given to take during her absence as a digestive tonic:

Fluid extract of *enseada sagrada* . . . 3 drachms;

Dilute nitrohydrochloric acid . . . 4 "

Elixir of calsaya bark 4 ounces.

M. Sig.: One tea-spoonful half an hour before meals as needed to keep bowels open.

Also—

Arsenous acid $\frac{1}{8}$ grain,

Iron powder $\frac{1}{2}$ grain, each.

Tablets, 100. Sig.: One three times a day, just after meals.

She is to return for examination the last of September, and will continue under observation.

CASE VI. J. G., male, aged twenty years; shipper clerk. August 19, 1898. Father dead; mother living and well; one sister, one brother, both well. For the last two or three years not well, chronic malaria. Began to run down in April last, and had a severe hemorrhage, pulmonary, at that time. Went to the country, about until July 14th. No hemorrhage during absence. Made some gain. Since return has steadily lost weight,

troublesome cough, with expectoration; sense of malaise; poor appetite. In July had a very severe hemorrhage, lost a good deal of blood from which he has not recovered. On July 31st consulted Dr. C. O. Maisch, instructor in diseases of children, New York Post-graduate Medical School and Hospital, who reports the following:

"Slight dullness over left apex, anterior more marked; accentuated breathing. Vocal fremitus slightly increased, no râles. Right lung over apex a few sibilant râles, respiration over both lungs very much restricted. Retraction of intercostals and some dyspnoea always present. Expectoration moderate, cough not very troublesome. Haemoptysis; anorexia; malaise weakness; emaciation progressive. Sputum contains a very few tubercle bacilli. Temperature, 100.2°; pulse, 110.

"August 12th.—Physical examination: Over left apex dullness to within an inch of inferior angle of scapula, and over this area there is marked increase of vocal fremitus; bronchial and tubercular breathing; crepitant and subcrepitant râles; moist mucous râles over the entire surface indicated. Right lung unaffected. General condition much worse. Temperature, 101.5°; pulse, 120; cough troublesome and expectoration considerable.

"August 20th.—Patient in same condition; complains a great deal of weakness."

This patient was referred to the writer for treatment August 19, 1898. Physical examination was not made nor treatment instituted until August 20th. At that time patient presented appearance of a very ill person, loss of flesh, great difficulty in breathing, rise of temperature, evening and morning cough most marked, occasionally during day, moderate expectoration, poor appetite, regular bowels, malaise, great weakness, and walked with difficulty even a few steps.

Physical Examination.—Inspection: Patient much emaciated, anæmic; chest walls retracted; left chest flattened, with impaired motion.

Palpation: Marked increase of vocal tactile fremitus over left chest anteriorly.

Percussion: Marked dullness over upper half left lung anteriorly and posteriorly.

Auscultation: Crepitant and subcrepitant râles over area of dullness on left; vocal fremitus markedly increased; harsh breathing. Right side normal.

Patient very weak and obliged to sit several times during the examination.

Treatment: Electric-arc bath; exposure twenty to thirty minutes; temperature, 90° F.; followed by Franklinic current, positive insulation, convective discharge with the crown electrode for fifteen minutes, and with brush electrode to entire general surface (nutritional) localized to chest walls front and back (lungs) for five minutes. Afterward sat upon the platform for five to ten minutes daily with ground connection removed and discharging rods within sparking distance of one another. During this time directed to breathe deeply and steadily of the nasal apparatus.

Daily treatments given up to August 27th, excepting the intervening Sunday, and gave a two minutes exposure later for 1000 amperes. From the beginning of treatment there was a gradual improvement of dyspnoea, increasing respiratory capacity, and a decrease in cough, with, as a rule, better coloration.

On August 25th appetite improved, much better forces brighter, respiration freer, and color very in the morning.

ing, and less than before; taking sufficient food, but without special appetite; lowered temperature and diminished pulse rate; able to walk five or six blocks without much effort. On the 26th and 27th had rather a sharp attack of diarrhoea which caused considerable weakness. From August 19th the weather was excessively hot, with great humidity, and as patient's home was a single room in a tenement house in the most crowded portion of the city, he was unable to get much rest at night.

On August 27th referred back to Dr. Maisch for examination with the following result: Temperature, 99° F.; pulse, 115; general condition of patient improved; dyspnoea less troublesome (very much); cough less. Lungs: Left apex, dullness as before, has not extended. Rhonchi seemed fewer in number, and would indicate that liquefaction was not so great as at last examination. Right lung not affected. Moderate diarrhoea. To patient, physician stated "you are very much better." Treatment: August 29th as before. Slight diarrhoea; coughing but little, and in morning only; raising less than before. In answer to an inquiry as to why the patient did not return for treatment, the following letter is quoted:

223-225 EAST ONE HUNDRED AND SEVENTY-SIXTH STREET,
NEW YORK CITY, September 7, 1893.

DEAR DR. CLEAVES: Yours of the 2d inst. in reference to J. G. received. I had heard nothing of him, and so looked him up yesterday at his home in Baxter Street. He has been in bed some days. I found him with temperature 104° F., pulse 120, and in pretty bad condition. He has an acute pleurisy on the left side anteriorly. The physical signs in the chest have not changed since I saw him, except that he has developed a diffuse bronchitis, involving both sides. His general condition is worse; his surroundings are bad, and the hygienic conditions hopeless. He has had no hæmorrhage. Should he get up again he will come to you.

Yours,

C. O. M.

CASE VII. *Eczema Cruris*.—A. M., a woman, aged twenty-nine years, single; dressmaker. February 18, 1896.

Presented herself because of spot on anterior surface of right leg. One year since fell and scratched her leg below the knee. Spot became red, infiltrated, itched moderately with tendency to moisture, stocking adherent; later crusts appeared on the surface.

Physical Examination.—A patch size of palm of hand below patella, color dull red; covered with crusts and exuding moisture; tissues underneath thickened and swollen.

Treatment: Continuous current, active electrode, six square inches in area over eczematous surface negative; indifferent electrode right foot in normal saline solution. Temperature, 100° F., five milliamperes, ten minutes.

Four applications were made, extending over a period of ten days. After second treatment marked hyperæmia over upper part of patch; tissues softer, with partial loss of crusts. After third treatment several islets of healthy skin visible, fewer crusts; improved circulation. Because of general malnutrition treatment changed from local application of the continuous current to general nutritional treatment as follows: Electric-arc bath; exposure thirty minutes; temperature of bath, 90° F.

Two treatments extending over a period of sixteen days. Not able to come for further treatment because of a severe cold contracted from exposure going to and from her work. In May reported through a friend that the patch of eczema had entirely disappeared. No drugs given. From clinical experience with other cases of eczema treated solely by the continuous current the opinion is justified that the prompt and complete disappearance of the eczematous spot was due to the action of the electric arc. The light was focused directly on the spot of eczema.

CASE VIII. *Subacute Bronchitis*.—F. W., a girl, aged three years. December 3, 1896.

At the age of sixteen months patient had pneumonia, at two years tonsillitis, and eight months subsequently malaria, intermittent type. Two weeks prior to admission contracted a severe cold, characterized by febrile disturbance, loud breathing, moaning in sleep, pain through chest and cough at night.

Physical Examination.—Subcrepitant râles over chest anteriorly and posteriorly; crepitant râles in inferior clavicular region left; sibilant râles right.

Treatment: Electric-arc bath; exposure twenty minutes; temperature of bath, 90° F.

Eight treatments given, covering a period of six weeks and a half. Pulse and temperature records taken before and after treatment showed that the pulse, markedly irregular before treatment, became normal in character after the first three treatments. It was uniformly diminished in rate and of better volume. Upon leaving the bath the skin was always warm and moist and respiration freer.

At the fourth visit physical examination revealed the presence of large mucous râles, and the mother reported that the cough was looser. After the fourth treatment patient did not cough during the night. The congestion gradually disappeared, appetite and sleep improved, and respiration became normal. Patient always fell asleep in bath. Discharged recovered. No drugs given.

September 1, 1898.—No trouble since.

CASE IX. *Psoriasis Universalis*.—H. B., a woman, aged twenty-six years, single; nurse. April 10, 1895.

Referred from the New York Skin and Cancer Hospital.

Physical Examination.—General eruption over body, more marked on extensor surfaces of arms and legs; red papules covered here and there with silvery white scales; no discharge; conjunctiva and gums anæmic; depressed; case has proved an obstinate one, and has not yielded to classical treatment.

Treatment: Electric-arc bath; patient nude; exposure thirty minutes; temperature of bath, 90° F. Four treatments given, extending over a period of nine days. After first bath, circulation improved, skin warm and moist; patient felt warm and comfortable and looked rested.

At second visit improved appetite and sleep with general sense of well-being. After second treatment remarked that she "felt that she had been born again." Improvement continued, characterized by nutritional gain and clearing up of skin. Treatment suspended at end of nine days, as patient had to leave the city. Subsequently heard from through an interne of the New York Skin and Cancer Hospital, who reported that she was entirely well. No drugs given. In this case, as well as every other reported, the patient always looked rested and refreshed upon leaving the bath, skin moist and rosy, eyes bright.

IODOFORM AS AN INTERNAL REMEDY IN LUPUS ERYTHEMATOSUS.

By HENRY H. WHITEHOUSE, M.D.

AFTER all that has been said recently at dermatological gatherings, both here and abroad, upon the subject of lupus erythematosus and its treatment, there would appear to be little excuse for one to record his experience with an internal remedy in a single example of the disease. The result, however, was so striking in this instance that a plain recital of the facts as they were observed will at least be of some interest, and might, in the opinion of the author, lead to further investigations that would possibly be of value.

There is no disease in the entire domain of cutaneous medicine that is more rebellious or unsatisfactory to treat than lupus erythematosus; this, I believe, is generally conceded by all who have made a special study of this class of affections. If, therefore, any drug is found to be capable of curing, or of contributing even to the cure of, one case of the disease, whether or not its effects can be explained on pathological or other grounds, the fact is certainly worth recording.

The case itself was a very unusual one, not only because it presented a great number of small patches of the disease, but in consequence, also, of the peculiar and extensive distribution of the diseased areas. For these reasons, it is thought that the following brief history may not be without interest:

The patient, an unmarried woman, fifty-two years of age, has always enjoyed the best of health. There is no history of tuberculosis in any branch of the family; on the contrary, all her people are rugged and long-lived, both her parents having passed the age of ninety.

The disease began three years ago on the scalp, which has been the seat of active lesions ever since. Soon after the eruption appeared she contracted a severe cold and applied capsicum plasters to the upper part of the chest, front and back, in the median line. When these were removed, the skin beneath was greatly irritated, and there quickly developed upon it lesions similar to those upon the scalp, which remained several months and disappeared. A year later, however, the disease developed again in these localities, and has remained to the present time, a period of two years.

Simultaneously with the recurrence upon the chest and back, a few small patches appeared on the external ear and behind it, on the sides of the neck near the angle of the jaw, and one patch on the bridge of the nose. The backs of the hands and the forearms became affected about the same time, and two or three lesions formed on the inner side of the left knee; these latter disappeared in a month or two, their sites now being marked by superficial scars. Those on the forearms were very numerous at one time, as evidenced by the many small atrophic scars scattered over the surface; one active patch, existent now on the right forearm, has existed two years.

During the past ten months the disease has progressed very rapidly upon the face, and at present its gradual extension from week to week is readily noticeable.

The eruption is everywhere typical of lupus erythematosus, of a superficial type, and is markedly symmetrical in distribution. There are a great number of disfiguring, red, scaly patches upon the face, none larger than a five-cent piece, and many of them much smaller; there are no diffuse areas. Active lesions of the same character are found upon the scalp, together with small areas of alopecia resulting from earlier disease. Those on the chest and back and behind the ears show beginning atrophy in the centre. On the upper extremity the eruption is confined to the backs of the hands and the extensors of the forearms. The patient complains of almost intolerable itching.

The case, therefore, was one of disseminated lupus erythematosus of the superficial, discoid variety. In spite of its superficial character, however, for a year before she came under my observation she had been continuously treated by competent men, without any benefit; on the contrary, as before remarked, new lesions were developing all the time.

Treatment was begun March 1, 1898, with a lotion commonly known as "lotio alba," to four ounces of which a drachm of precipitated sulphur was added. This is a lotion that is used extensively in the treatment of acne, but I have used it also in lupus erythematosus with very good results. It was in just such cases—namely, the superficial type of lupus erythematosus—that Duhring* some years ago advocated the use of this particular remedy, in connection with which he cited several cases that were greatly benefited by it. The formula generally employed is sulphate of zinc and sulphide of potassium, each one drachm; water, four ounces. For two months and a half—that is, until May 17th—she used this remedy, with the addition of the sulphur, without the least benefit.

In the meantime I had presented her to the New York Dermatological Society as an unusual example of the disease, and the diagnosis was concurred in by all the members present.†

At the suggestion of Dr. A. R. Robinson, made at the meeting, she was given, on May 17th, a one-grain pill of iodoform after each meal, continuing at the same time the use of the lotion. In a few days the lesions began to tingle and burn, and became very much more pronounced. At the end of a week they were decidedly inflammatory, but the treatment was persevered in. After two weeks' treatment her condition was very much worse, the lesions everywhere presenting a very angry appearance, but as there were no general bad effects the remedy was continued in the same dosage. At the end of the third week the redness and inflammation began to subside, so that in four weeks from the time she commenced to take the pills all the tenderness, burning, and itching had disappeared, and the lesions were fast becoming

From this time improvement was uninterrupted, and

* *Ph. Med. J. N. S.*, November 19, 1888.

† *Journal of Cutaneous Medicine and Surgery*, December, vol. XXIV, p. 51.

in three months from the beginning of the internal treatment the eruption had entirely disappeared. The pills have been continued to the present time, a period altogether of seven months, though there has been no manifestation of the eruption for nearly four months.

The only reference that I can find in literature relating to the use of iodoform internally in lupus erythematosus is by Desnier,* who in 1880 cured two cases of the disease by means of it. They were both very rebellious cases, the lesions in one being seated upon the face, in the other upon the face and the backs of the hands; the latter case was cured before the end of the third month.

Without drawing any conclusions from the experience of one case, it would certainly appear that the iodoform contributed largely to the rapid improvement that took place soon after its administration and to the ultimate cure of the disease. Up to the time of its exhibition the case acted indifferently to the local measures employed, but showed a distinct reaction after it had been taken only a few days. It is unreasonable to suppose that the case was one of those which recover spontaneously, such recovery beginning only at this particular time; neither is it probable that the local application alone wrought this sudden change in the course of the disease after it had been used over two months with no effect.

Whether this particular lotion contributed at all to the final result can only be ascertained by further observations, in the course of which the drug should be tested alone in some cases and in conjunction with local treatment in others.

24 WEST THIRTY-SIXTH STREET.

THE VALUE OF AN ABSOLUTE NEGATIVE DIAGNOSIS IN CASES OF SUSPECTED FRACTURE.

By CHARLES LESTER LEONARD, A.M., M.D.,

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In many cases of suspected fracture the ordinary symptoms may be absent on account of the relation of the fractured bone to others that are not fractured; on account of the line of fracture involving a joint or lying wholly within its capsule; because the case has not been seen sufficiently early to make it possible to elicit the pathognomonic symptoms of fracture, or in cases of impacted fracture.

In such cases it is often impossible to establish a diagnosis, and treatment has, therefore, to be carried out as if the more serious injury were present. As a consequence, a patient having a suspected fracture in-

volving the shoulder, the ankle, or the knee is compelled to forego the use of a limb for a period much longer than would be the case if an absolute negative diagnosis could be established.

No matter who the patient is, whether a society woman, a banker, a professional or a laboring man, the deprivation of the use of a limb, or the confinement in bed for at least five weeks longer than would be the case if an absolute negative diagnosis of fracture had been made, is a serious consideration.

Do we now possess the means of establishing an absolute diagnosis? I think we do. The Röntgen ray, if properly employed, is capable of making these absolute negative diagnoses, and its clinical value in this direction has been forcibly illustrated by the following cases:

A lady in going downstairs slipped and, in trying to save herself, brought a severe strain upon her right shoulder. The attending physician suspected a fracture of the neck of the scapula. An examination confirmed the suspicion, and the skiagraph demonstrated the correctness of the diagnosis. The patient, as a consequence, willingly acquiesced in the necessary treatment, which she would otherwise have refused to undergo.

In the case of a clergyman, a severe contusion, resulting from a trolley accident, made the use of the arm almost impossible. He did not consult me for some time after the accident, and then declined to take either for an examination. The skiagraph demonstrated the absence of fracture, and under appropriate treatment he rapidly regained the full use of the arm. He was thus saved four weeks of treatment that would have been necessary if the negative diagnosis had not been established and he had persisted in declining etherization.

The case of a dentist illustrates the value of an absolutely positive diagnosis. A chip from the margin of the glenoid fossa was easily detected, and the appropriate treatment resulted in perfect functional recovery.

A surgeon sustained a severe fall, and the symptoms were so marked that a serious injury was thought probable. The skiagraphic examination established a negative diagnosis, and the patient got out weeks sooner than he otherwise would.

A lady sustained a severe wrench of the ankle, and the experience she had had with severe sprains in her family led her to suggest a skiagraphic examination. This was readily acquiesced in by her attending physician and the consultant, as the parts were much swollen before she was seen, and a satisfactory examination could not be made. The skiagraph showed a fracture through the tip of the external malleolus, and the subsequent treatment for fracture resulted in complete functional recovery.

Another lady refrained from calling in her physician for some time after receiving an injury to her foot. The physician was unable to make an absolute diagnosis, and the consulting surgeon could not establish a negative diagnosis. The skiagraphic examination demonstrated the absence of fracture, and the patient was spared a treatment extending over from four to five weeks.

In the case of another lady, a fall on the elbow caused a contusion of the shoulder joint, while an apparent shortening led to the suspicion of impaction. The skiagraph demonstrated the absence of all osseous injury and shortened the treatment.

* *Annals de dermatologie et de syphiligraphie*, 1880, p. 628.

Numerous other instances might be cited in which injury to the various joints has been suspected, in which the absolute diagnosis by the Röntgen-ray method saved the patients serious loss of time, which would have been well spent if the absolute diagnosis of the absence of an osseous lesion could not have been established.

In addition to those lesions that involve the joints, the negative diagnosis which the Röntgen ray has made possible is most valuable in injuries of the phalanges, the metatarsal bones, and any other bones where the ligamentous attachment to another parallel bone masks the symptoms and makes the diagnosis difficult. This is also true of linear and splitting fractures and also of impacted fractures.

1930 CHESTNUT STREET.

STATIC ELECTRICITY FOR SPRAINS.

By CHARLES O. FILES, M. D.,

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IN the discussion of sprains hitherto, directions have been given for four methods of treatment, following each other or combined, according to the judgment of the surgeon. These methods are rest, the application of cold, massage, and passive followed by active movements. Of all external applications my own experience favors the copious innation of very hot lard, or lard oil, used very frequently. The use of electrical massage is, however, so far superior to all other forms of treatment that we may safely discard their consideration except as adjuncts to the electricity.

A sprain is usually a laceration of capsular or lateral ligaments, with or without ruptured tendons, torn muscles, contusion or laceration of the synovial membrane. We know now, thoroughly, that repair of the injured tissues occurs as the result of internal rather than external forces. We use external applications for the purpose of stimulating the circulation, thus bringing an extra amount of blood to the parts and hastening its departure after it has accomplished its laudable object. Rest is also a useful ally, although we can now accomplish good results with less absolute rest than was formerly considered necessary. Electrical massage with the static roller meets all the indications for the successful treatment of these injuries more perfectly than all other means combined.

In proof of this statement very brief notes of two cases are here given, selected almost at random from a large number of similar histories in my private practice. The use of electricity in sprains had never occurred to me until an experience of more than fifteen years with hot and cold applications, bandaging, and rest had fully demonstrated the mutuality of these methods.

CASE I.—A policeman, weighing two hundred and fifty pounds, started to run toward a house from which cries of "murder" were coming. He stepped on some

thing which turned his ankle, but his impetus was so great that he was obliged to run twenty or thirty steps before he could stop. With the greatest difficulty, supported by a cane, he came to my office. On account of his great weight and the extreme swelling and pain, the indications were that he would be laid up a considerable time. A thick woolen shawl, folded many times, was carefully placed over the ankle and foot, and the static massage roller was used as strongly as he could bear it for fifteen minutes on the foot, ankle, and leg. The patient was seated on a stool on the floor, not on the insulated platform. The roller was attached by the chain to the positive pole of the static machine. This same treatment was followed for five days in succession. At the end of one week he resumed his duties as police officer.

CASE II.—A man, aged fifty, who weighs two hundred and thirty pounds, jumped over a fence five feet high. When he struck the ground on the other side of the fence one foot was turned over and the whole weight came down on the bent ankle. The pain was so intense that he fainted away. The accident happened in the immediate vicinity of my office, and the man was assisted there, and the same treatment was given as in the previous case. He attended to his business every day, and in two weeks could scarcely tell which ankle had suffered the injury.

There is no doubt but that in this class of cases the length of confinement to the house may be shortened very considerably by the use of electricity. For commercial travelers, often obliged to stay at hotels at very great expense, the length of time of enforced absolute rest is an important consideration. Accident-insurance companies are especially interested in the length of time during which they must pay weekly indemnities. It is very much for their interest to have the patients in these cases get well quickly. In saying that these patients will recover, when electrical massage is thoroughly used, in half the time required by other forms of treatment, a very conservative estimate is made.

Therapeutical Notes.

A Tampon for Cancer of the Uterus.—The *Riforma medica* for December 5th gives the following:

R Orthoform 15 grams;
Arsenious acid 1½ gram;
Alcohol, of each 120 minims
Water, A

M.

A tampon of absorbent cotton is saturated with this solution and applied *per vaginam*.

An Ointment for Infantile Impetigo of the Head and Face.—The *Riforma medica* for December 10th ascribes the following formula to Kistler:

R Salicylic acid 2 parts;
Bismuth subnitrate 10 "
Rose ointment 100 "
Powdered starch 15 "

M

Lanoform.—This is described (*Giornale di farmacia di Trieste*; *Gazzetta medica lombarda*, December 5th) as lanolin mixed with one per cent. of formaldehyde. It is used as an antiseptic.

The Treatment of Gastro-intestinal Intoxication in Infants.—Perrier (*Annales de médecine et de chirurgie infantiles*, November 15th; *Riforma medica*, November 23d) recommends in light forms unaccompanied by general phenomena, such as vomiting, diarrhœa, tumid abdomen, stationary or diminished weight, the suspension of milk, substituting for it boiled water, or slightly alkaline water, rice water, barley water, etc. The following prescription should be given:

R Benzonaphthol $\frac{1}{2}$ to 9 grains;
Salicylate of bismuth.... $\frac{7}{8}$ to 15 “
Syrup of orange flowers..... 450 minims;
Mucilage of acacia..... 1,350 “

M.

A teaspoonful every two hours.

If the dejecta are fetid, infrequent, and if there is tympanites, give:

R Calomel $\frac{3}{4}$ to $1\frac{1}{2}$ grain;
Sugar of milk..... 13 “

In those forms in which to the before-mentioned symptoms are added fever, fetid breath, foul tongue, thirst, and loss of weight, milk should always be suspended, water alone being given. Gastric and intestinal lavage with boiled water or a seven-tenths-per-cent. saline fluid should be practised; warm, moist compresses should be applied to the abdomen, and if there is hypothermia hot baths should be given, while tepid or cool baths should be used with hyperthermia. Thirty cubic centimetres (about four hundred and fifty minims) of artificial serum should also be injected every three or four hours.

Trigeminal Neuralgia.—Hirschkrone (*Gazzetta degli ospedali e delle cliniche*, December 23d) recommends the following:

R Extract of cannabis indica $\frac{7}{8}$ grains;
Salicylic acid 75 “

M. To make ten powders.

Three powders to be taken daily.

For Phthisical Diarrhœa.—De Renzi (*Riforma medica*, December 23d) recommends:

R Iodoform 30 grains;
Tannin 60 “

M.

Divide into ten powders. From two to four to be taken daily.

For Phthisical Constipation.—The same author in the same journal recommends:

R Iodoform 30 grains;
Naphthalin 30 to 60 “

M.

Divide into ten powders. From two to four to be taken daily.

A Plaster for Lupus of the Vulva.—The *Riforma medica* for December 9th gives this formula:

R Olive oil, {
Rosin, { each 8 parts;
Yellow wax, {
Gum ammoniac, { each 1 part;
Venice turpentine, {
Pyrogallie acid 4 parts.

M.

THE

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THE RANK OF THE ARMY MEDICAL OFFICERS.

If the course is followed which almost everybody expects will be pursued—that, namely, of our retaining the Philippine Islands—the country will require an army of more than a hundred thousand men, and that will call for a large increase of the medical corps. This has already been asked for by the surgeon-general. At a recent meeting of officers of the corps a special committee was appointed to gather the views of the department concerning those provisions of a bill before congress which relate to an increase of the medical corps. The committee, consisting of Colonel and Assistant Surgeon-General Dallas Bache, Lieutenant-Colonel and Deputy Surgeon-General Charles Smart, and Major and Surgeon Louis A. La Garde, has sent to the secretary of war, through the adjutant-general of the army, a statement of what seems desirable for promoting the efficiency of the medical corps. One of the capital points made is that a larger proportion of the medical officers should have high rank, so that any member of the corps may look forward to retirement, when he reaches the age limit of sixty-four years, with the rank next below that of the surgeon-general, that is to say, the rank of colonel. Under the present conditions, the committee remark, it not infrequently happens that a medical officer is retired with the rank of lieutenant-colonel, and sometimes with only that of major, and this after a lifetime of service requiring high professional attainments and involving heavy responsibilities.

The Hull bill provides for 500 medical officers in addition to the surgeon-general—10 (two per cent.) colonels, 20 (four per cent.) lieutenant-colonels, 110 (twenty-two per cent.) majors, and 360 (seventy-two per cent.) captains and lieutenants—while it provides for 569 other staff officers, of whom 48 (over eight per cent.) are to be colonels, 79 (nearly fourteen per cent.) lieutenant-colonels, 165 (twenty-nine per cent.) majors, and 277 (nearly forty-nine per cent.) captains and lieutenants. These provisions, the committee justly say, fail to do justice to the medical profession. Medical officers, they add, desire their responsibilities to be recognized, and that they themselves be endowed with as much rank, power, and position as offi-

cers of corresponding age and experience in the other staff corps. They therefore recommend that the Hull bill be amended so as to provide for 20 assistant surgeons-general with the rank of colonel and 30 deputy surgeons-general with the rank of lieutenant-colonel, and to reduce the number of assistant surgeons with the rank of captain and lieutenant from 360 to 340. The assistant to the surgeon-general, the chiefs of the large and active divisions in his office, the chief medical inspector and his assistants, the dean of the Army Medical School, the chief surgeons of home and colonial military departments, the officers commanding the general hospitals of from 500 to 1,000 beds, the chief surgeons of the large garrisons and camps assimilating a brigade organization, and the medical supply officers, they think, should all be colonels or lieutenant-colonels. They further recommend that promotions be made by seniority after the examination required by existing law has been passed.

The committee add that, were they to give full expression to their views of what is desirable and would be beneficial for the medical department and the army as a whole, they would urge the adoption of those parts of senate bill No. 4,900 which provide for 596 officers, comprising a surgeon-general with the rank of brigadier-general, 20 assistant surgeons-general with the rank of colonel, 30 deputy surgeons-general with the rank of lieutenant-colonel, 175 surgeons with the rank of major, 120 assistant surgeons with the rank of captain, and 250 assistant surgeons with the rank of lieutenant mounted. This would provide for a medical officer to every 168 men of an army of 100,000.

The statement concludes as follows: "We would, indeed, go further than the said senate bill when we consider the importance of the medical department of an army of 100,000. Whether it is viewed in the light of medical supply, involving the expenditure of large sums of money; in the light of sanitation, involving the military efficiency of the whole command; in the light of military administration over so many officers, hospital corps men, nurses, and hospital establishments; or in the light of caring for 10,000 men, or ten per cent. of the army—which is an average percentage of sick in times of active service—the importance of the work and the extent of the responsibilities appear to us to be more than equivalent to those of a division commander who has the rank of major general. The chief of the medical department in most European armies has the rank of major general. We, therefore, are of the opinion that in recognition of the great responsibilities attaching to the surgeon-general of such an army the officer holding this position should have the rank of major general, and that the

senior of the assistant surgeons-general should have the rank of brigadier-general."

For our part, we think the committee would have been abundantly justified in urging the elevation of rank mentioned in the last paragraph of their statement—that and nothing less. The growth of the army warrants it, and the importance of having the medical corps of the highest order demands it. Still, it is to be presumed that the gentlemen of the committee are wise in mentioning a list of minimum requirements, in view of what action congress might take or decline to take on propositions involving rather radical changes.

A HÆMORRHAGIC MICRO-ORGANISM.

C. KLEIN (*Centralblatt für Bakteriologie und Parasitenkunde*, xxii, 4; *Centralblatt für innere Medizin*, November 5, 1898), after alluding to the bestowal by the laity of a common name on various diseases of sheep, speaks of one of those diseases as being manifested by hæmorrhagic oedematous swelling of the groins and of the abdominal wall, proceeding from the vulva, in sheep that have recently dropped lambs, proving fatal in from twenty-four to ninety-eight hours. In the skinning of these animals three persons acquired a vesicular affection of the skin which seemed to have many points of similarity to the carbuncular manifestations of anthrax. The fluid contained in the vesicles had a bloody color. Besides the vesicles, there were observed in the human subject only erythema, swelling of the axillary glands, and local itching and irritation, but without any elevation of temperature. From the contents of the vesicles the author obtained by cultivation a staphylococcus-like micro-organism into the behavior of which on various media, together with its staining reactions, he goes largely, particularly as to the points that distinguish it from the micrococcus found by Nocard in cases of the gangrenous mastitis of sheep.

Clinically, the two organisms are chiefly distinguished from each other in their effects by the fact that Nocard's micrococcus gives rise only to transitory boils, while the micro-organism found by the author always occasions extensive hæmorrhagic oedema of the subcutaneous tissue and of the muscles. In several instances, also, hæmorrhagic enteritis and, especially after intraperitoneal injection, hæmorrhagic peritonitis have been observed. The small size of the liver is striking. The infection is almost always fatal. Inoculation is possible by the employment of preliminary inoculations with highly attenuated culture products, but the immunization is not perfect, for the subsequent inoculation of large quantities of the unattenuated product still

gives rise to the disease, although its development is postponed.

In two instances Klein has inoculated sheep with his micro-organism. One of the animals died, and the other recovered after having for a long time shown severe illness with a temperature of 106° F. From the sheep that died there was obtained a micro-organism that displayed the greatest virulence when inoculated into guinea-pigs.

MINOR PARAGRAPHS.

THE HOSPITAL PATIENT'S RIGHT TO SECRECY.

DR. EDMUND ANDREWS (*Journal of the American Medical Association*, January 7th) points out a much-neglected fact that the purposes of clinical instruction and hospital administration apart, and these are by implication waived by the patient on becoming an inmate of a hospital, the hospital patient has as much right to secrecy in regard to his affairs as the private patient. For instance, says Dr. Andrews, a patient in a hospital may have a claim, or perhaps a suit against a railway company for injuries received on its line. The hospital or its officers may not furnish to the railway company, or to any outside parties, any information about the injuries without the patient's consent. A patient may have syphilis, and the disease may be shown and fully explained to the clinical class, but it must not be divulged to his inquiring neighbors and friends, unless he desires it, which he probably does not. An agent of an accident insurance company often inquires about the condition of an injured patron, but it is not proper to inform him, unless the patient wishes it, and so of all other cases. The personal honor and the legal obligation of the surgeon are pledged to preserve the patient's secrets, except where necessarily waived for hospital purposes. The growing tendency to make sensational paragraphs for newspaper purposes out of the ailments of hospital patients renders this warning specially apposite; for it may be reasonably assumed that the information could not, in many instances at least, have been obtained without a grave dereliction of duty on the part of some of the hospital staff—doctors, nurses, students, or attendants—all of whom are in honor equally bound.

THE TREATMENT OF GRANULAR CONJUNCTIVITIS WITH SALICYLIC ACID.

THE *Presse médicale* for December 24th reports the treatment of granular conjunctivitis by M. Moby with local applications of salicylic acid. A solution of salicylic acid in alcohol of a strength of one in ten is used, and is applied to the granular surfaces with a pledget of absorbent cotton wound on a metallic holder and soaked in the solution and squeezed dry. A few seconds only are needed for the application. The treatment is said to be somewhat painful at first, but the pain quickly abates and then immediate relief is said to follow, much more marked in degree than with other topical applications. It lasts longer and becomes more marked with successive applications. The cornea, moreover, it is said, tolerates salicylic acid perfectly without giving rise to pigmentation should corneal ulcers be present. The cauterizations are repeated at first

daily, then every two days, and finally once or twice a week. No other treatment is called for in uncomplicated cases. This procedure certainly seems to merit a trial. The addition of one per cent. of cocaine to the solution would probably dispose of the only evident objection, the initial pain.

THE "SIGN OF THE SOU."

It seems that the *signe du sou* is the sound heard in a variety of auscultatory percussion in which a piece of metal is held against the point of the chest opposite the examiner's ear and struck with another piece of metal. Pitres published an article on its diagnostic significance in the *Nice médical*, 1898, No. 1, and Citron, whose abstract of Pitres's article appears in the *Deutsche Medizinische-Zeitung* for January 9th, proposes for the procedure the German name *Stäbchenplemmeterperkussion*. The sound transmitted by healthy lung tissue is described as dull and wooden. It is dull, too, when it comes through tuberculous or pneumonic foci, except when there is very extensive infiltration. When there is a large zone of air alone, as in pneumothorax, there is a "brazen" resonance. When there is a large area of perfectly homogeneous material, as in cases of extensive neoplasms, and especially in those of pleurisy with effusion, the sound is clear and silvery. If an area of dullness is found extending from above downward over one lung, one may sometimes be in doubt how far to attribute it to free fluid and how far to pneumonic infiltration. In such cases the *signe du sou* indicates the level of the layer of liquid, and in like manner the diagnosis may be made of pleuritic exudation and effusion.

SURGICAL OPERATIONS FOR THE DELECTATION OF REVELERS.

It was stated recently in the *Sun* that it had become the fad among the gay youngsters of Paris to amuse themselves after dinner with witnessing cinematographic representations of surgical operations, and that publicity had been given to the matter as the result of indignation on the part of a man who was present at such an exhibition when he recognized in the patient represented a well-known Paris lady. It is hardly to be supposed that such displays, if they show real operative procedures, can be arranged without the connivance of medical men, and we are loath to believe that men of our profession can be found to prostitute themselves to such base purposes.

POISONING BY HYSSOP.

At Birmingham, England, according to the *Lancet* for January 14th, a pregnant woman died from taking an infusion of hyssop. She was said to be a subject of Bright's disease. We are not told which variety of hyssop is referred to, and there are many varieties of this plant belonging to the natural order of *Labiata*, which order is commonly held to be harmless in its properties. We presume that the *Hyssopus officinalis* is the one in point.

THE ALKALINE TREATMENT OF STERILITY.

SOME additional evidence in favor of the treatment of functional sterility by alkaline vaginal injections is adduced in the *Revue médicale de l'Afrique du Nord*, cited by the *Revue médicale* for January 18th. M. Trou-

ette, a veterinary surgeon of Lyons, treated four hundred and thirty-six mares, which had been previously ineffectually covered, by means of vaginal douches containing seventy-five grains of bicarbonate of sodium in a litre of tepid water, administered an hour before copulation, the object, of course, being to counteract the hyperacidity of the vaginal mucus. No less than two hundred and seventy-seven of these mares became fecundated, a hundred and forty-eight remaining sterile, and fourteen being lost sight of. Old brood mares which had been pregnant for many years were thus fecundated, and one mare, eight years old, which had been covered unsuccessfully for three consecutive years, produced a fine foal.

A NEW REGIMENTAL BADGE FOR THE ROYAL ARMY MEDICAL CORPS.

THE efforts that have been recently made in England to place the army medical service on a footing in every way satisfactory to the profession of medicine should be appreciated by our transatlantic brethren. As trifles often indicate more than they express, we may be permitted to remark that the regimental device for the new corps, which we learn from the *British Medical Journal* for January 14th has been approved—viz., the serpent and rod intertwined, the insignia of the healing art almost from time immemorial, enbossed in a laurel wreath, surmounted by the imperial crown—seems to us particularly appropriate. The motto *In arduis fidelis* is also singularly felicitous.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending January 28, 1899:

DISEASES.	Week ending Jan. 21.		Week ending Jan. 28.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	14	4	14	6
Scarlet fever.....	162	17	202	11
Cerebro-spinal meningitis.....	0	5	0	6
Measles.....	159	10	174	13
Diphtheria.....	180	26	197	30
Croup.....	12	9	10	3
Tuberculosis.....	189	176	200	191
Small pox.....	0	0	0	0
Chicken-pox.....	35	0	27	0

Conviction of a Christian Scientist.—We learn from the *Cleveland Journal of Medicine* for January that Harriet O. Evans, a "Christian Scientist" of Cincinnati, complacently allowed Thomas McDowell to die of typhoid fever without any treatment except the much-vaunted prayer of these peculiar people. Under the energetic initiative of Dr. Charles A. L. Reed, of Cincinnati, who is a member of the State board, she was prosecuted for practising medicine without a license. The police court jury is reported to have employed just twenty minutes in deciding that she was guilty as charged. The case has been appealed, of course, but it is a most excellent beginning. The thanks of the medical profession of the State, says the *Cleveland Journal*, are due to Dr. Reed for having shown in this and many other cases what a sincere and energetic member of the board can accomplish.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, and cholera were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending January 28, 1899:

Small pox—United States.

Calvert, Ala.....	Dec. 10-Jan. 20.....	10 cases.	2 deaths.
Clarke County, Ala.....	Dec. 25-Jan. 1.....	Disease generally prevalent.	
Mobile, Ala.....	Jan. 20.....	5 cases.	
New Haven, Conn.....	Jan. 16.....	2 "	
Origin of the disease, New Durham, N. J.			
Washington, D. C.....	Jan. 21.....	1 case.	
Origin, Alexandria, Va.			
Pensacola, Fla.....	Jan. 15.....	1 case.	
Marion County, Kan.....	Jan. 18.....	11 cases.	
Origin, Oklahoma.			
St. Louis, Mo.....	Nov. 1-Jan. 21.....	15 cases.	2 deaths.
Nebraska City, Neb.....	Jan. 9-16.....	4 "	8 "
Dunkirk, N. Y.....	Jan. 7-14.....	3 "	
New York, N. Y.....	Jan. 7-14.....		1 death.
Altoona, Pa.....	Dec. 31-Jan. 23.....	1 case.	
Bedford, Pa.....	Dec. 31-Jan. 23.....	1 "	
Drumbaugh, Pa.....	Dec. 31-Jan. 23.....	2 cases.	
Charlesville, Pa.....	Dec. 31-Jan. 23.....	15 "	
Claysburg, Pa.....	Dec. 31-Jan. 23.....	1 case.	
Philadelphia, Pa.....	Dec. 31-Jan. 23.....	9 cases.	
Alexandria, Va.....	Jan. 20.....	1 case.	
Norfolk, Va.....	Jan. 16.....	90 cases.	

Small pox—Foreign.

Pretoria, Africa.....	Dec. 24.....	Small-pox epidemic suppressed.	
Antwerp, Belgium.....	Dec. 24-31.....	10 cases.	2 deaths.
Rio de Janeiro, Brazil.....	Dec. 3-16.....	21 "	9 "
Paris, France.....	Dec. 21-31.....		1 death.
Calcutta, India.....	Dec. 3-10.....		1 "
Chichualhua, Mexico.....	Jan. 7-11.....		1 "
Mexico, Mexico.....	Dec. 31-Jan. 8.....		4 deaths.
Moscow, Russia.....	Dec. 17-21.....	14 "	8 "
Odessa, Russia.....	Dec. 21-31.....		1 death.
St. Petersburg, Russia.....	Dec. 21-31.....	1 case.	1 "
Warsaw, Russia.....	Dec. 17-31.....		4 deaths.
Bagdad, Turkey.....	Oct. 22-Nov. 27.....	96 cases.	20 "
Officially reported.			
Constantinople, Turkey.....	Dec. 26-Jan. 2.....		11 deaths.

Yellow Fever.

Rio de Janeiro, Brazil.....	Dec. 3-16.....	10 cases.	10 deaths.
Barranquilla, Colombia.....	Dec. 17-21.....	1 case.	1 death.
Calcutta, India.....	Dec. 3-10.....		1 "
Vera Cruz, Mexico.....	Jan. 5-12.....		1 death.

Cholera.

Calcutta, India.....	Dec. 3-10.....		6 deaths.
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The Ninety-third Annual Meeting of the Medical Society of the State of New York opened in Albany on Tuesday, January 31st. The meeting was called to order at 9.15 A. M. by the president, Dr. John O. Roe, of Rochester. The Divine blessing was invoked by one of the local clergymen, after which the president read his inaugural address. He touched upon matters of interest to the profession, giving special attention to medical education, the adulteration of food, the abuse of medical charities, tuberculosis in cattle, etc. In speaking on the abuse of medical charities, he expressed the opinion that persons able to pay for medical advice should be prosecuted under the charge of obtaining money under false pretenses.

Following the president's address were the reports of the various committees. The reading of the report of the committee on legislation by a new member of the society raised a little breeze of discussion, as the adoption of recommendations of the report was objected to on that ground. The discussion, however, was only temporary. When the meeting was called to order the

were only eighty members present, but the number soon increased to the seating capacity of the hall, about one hundred and sixty.

At the time of our going to press it seemed probable that the nominating committee would recommend for the presidency an Albany physician who has ever been an earnest and efficient worker in the interests of the organization. It was confidently expected that he, with the united support of middle and western New York, would receive the nomination.

Under the twenty-minute rule the reading of papers progressed smoothly and rapidly, and, as they were not extensively discussed, the full programme for the day was finished at the close of the afternoon session. There was to be a brief evening session, and on Wednesday evening the annual banquet was to take place.

Among the notable papers presented was one by Dr. H. R. Hopkins, of Buffalo, on Hygienic Camps. In the discussion which followed its reading, the remarks made by Dr. William Warren Potter, also of Buffalo, were such as to deserve the heartiest commendation. He deprecated the tendency widely shown some time ago to criticise the conduct of the medical corps of the army.

Worthy of General Imitation.—According to the *Boston Medical and Surgical Journal* for January 26th, the following resolution has been adopted by the Rochester Pathological Society: If any member be confronted with a suit at law for alleged malpractice, or similar charge, it shall be his duty to notify the society. The president shall thereupon appoint a committee of three to investigate the merit of the action, to advise the member brought into litigation, and to recommend to the society such measures as they consider should be taken.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, January 28th, Dr. Robert M. Funkhouser read a paper on Suppurative Puerperal Peritonitis with Nephritis; Coeliotomy; Recovery.

The Medical and Surgical Society of the District of Columbia.—At the ninety-first meeting, which was to be held in Washington, on Thursday evening, the 2d inst., the following papers were presented: The Causal Relations of Nasal Diseases to Diseases of the Eye, by Dr. Oscar McKimkie; and The Commitment and Detention of the Insane in the District of Columbia.

Changes of Address.—Dr. W. F. Donovan, to No. 337 West One Hundred and Forty-fifth Street; Dr. F. Mortimore, to No. 235 West One Hundred and Twenty-second Street; Dr. T. A. McNicholl, to No. 1919 Seventh Avenue; Dr. M. L. Tirrell, to No. 131 East One Hundred and Twenty-seventh Street; Dr. James P. Tuttle, to No. 42 West Fifthth Street.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending January 26, 1899:*

CARTLE, H. R., Surgeon. To report at bureau preparatory to detail for temporary duty in Cuba, January 23, 1899.

PETTEL, W. J., Passed Assistant Surgeon. To proceed to Port month, Va., for special temporary duty, January 26, 1899.

ROSENAT, M. J., Passed Assistant Surgeon. To proceed to Delaware Breakwater Quarantine for temporary duty, January 21, 1899.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 21 to January 28, 1899:*

BRADLEY, ALFRED E., Major and Brigade Surgeon, will proceed to Washington on business pertaining to the medical department of the army.

CARTER, W. FITZHUGH, Major and Surgeon, will proceed to Havana and report to the commanding general, Division of Cuba, for duty.

CULLEN, G. I., Captain and Assistant Surgeon, is honorably discharged from the service of the United States.

DAILY, WILLIAM F., First Lieutenant and Assistant Surgeon, is honorably discharged from the service of the United States.

EBERT, RUDOLPH G., Major and Surgeon, is detailed as a member of the examining board appointed to meet at Vancouver Barracks, Washington, vice WOLVERTON, WILLIAM D., Lieutenant-Colonel and Deputy Surgeon-General, retired from active service.

FISHER, HENRY C., Captain and Assistant Surgeon, will return to his proper station, Plattsburg Barracks, New York.

GANDY, CHARLES M., Major and Brigade Surgeon, will proceed to Fort Monroe, Virginia, for duty.

GARDNER, EDWIN F., Major and Surgeon, will proceed to Fort Logan, Colorado, for duty.

HALL, WILLIAM R., Major and Surgeon, will proceed to Washington and assume his duties as attending surgeon.

KERNACHAN, WILLIAM J., Major and Brigade Surgeon, will proceed to Anniston, Alabama, for duty.

O'BRIEN, A. P., Captain and Assistant Surgeon, is honorably discharged from the service of the United States.

RICHARD, CHARLES, Major and Surgeon, will proceed to Fort Monroe, Virginia, and assume command of the Josiah Simpson General Hospital at that post, relieving WOODHULL, ALFRED A., Lieutenant-Colonel and Deputy Surgeon-General. On being relieved, Lieutenant-Colonel Woodhull will proceed to Manila and report to the commanding general, Department of the Pacific, for duty as chief surgeon of that department, relieving LIPPINCOTT, HENRY, Lieutenant-Colonel and Deputy Surgeon-General. On being relieved, Lieutenant-Colonel Lippincott will proceed to Denver for duty as chief surgeon of the Department of the Colorado.

SHAKESPEARE, EDWARD O., Major and Brigade Surgeon, will proceed to Philadelphia to inspect apparatus for the sterilization of water.

SMART, CHARLES, Lieutenant-Colonel and Deputy Surgeon-General, is detailed as a member of the board of officers appointed to meet at the Army Building, New York, for the purpose of examining, testing, and reporting upon the various emergency rations as to their adaptability for use in the army.

TILTON, HENRY R., Lieutenant-Colonel and Deputy Surgeon-General, and HERVEY, PHILIP F., Major and Surgeon, are detailed as members of the army retiring board appointed to meet at St. Paul for the examination of such officers as may be ordered before it.

TIRRELL, HENRY S., Lieutenant-Colonel and Chief Surgeon, is honorably discharged from the service of the United States.

WOODRUFF, CHARLES A., Major and Brigade Surgeon, will report to the commanding general, Department of California, for duty in that department.

WYETH, MARLBOROUGH C., Captain and Assistant Surgeon, will report to the examining board appointed to meet at the Army Medical Museum, Washington, at such time after February 1st as he may be required by the board for reexamination for promotion.

Society Meetings for the Coming Week:

MONDAY, February 6th: New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society of Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, February 7th: New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Hampden, Massachusetts, District Medical Society (Springfield); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, February 8th: New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Medical Societies of the Counties of Albany and Allegany (quarterly), N. Y.; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, February 9th: Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; New York Laryngological Society; Medical Society of the County of Cayuga, N. Y.; Jenkins Medical Association, Yonkers, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, February 10th: Yorkville Medical Association, New York; Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, February 11th: Obstetrical Society of Boston (private).

Births, Marriages, and Deaths.

Married.

ANDERSON—REGNA.—In New York, on Thursday, January 26th, Dr. John Cameron Anderson and Mrs. Henry Milton Regna.

ROBINSON—COATES.—In Goshen, N. Y., on Wednesday, January 25th, Mr. Arthur R. Coates and Miss Mary Verplanck Robinson, daughter of Dr. Herman H. Robinson.

DENISON—STIVERS.—In New York, on Tuesday, January 24th, Dr. Charles Ellery Denison and Miss Mary Frances Stivers.

FISCHER—HILDBRETH.—In New York, on Wednesday, January 25th, Dr. Charles Sumner Fischer and Miss Florence Adelaide Hildbreth.

LOWDEN—MURRAY.—In Flushing, Long Island, on Saturday, January 21st, Mr. Thomas W. Lowden and Dr. May M. Murray.

HANLON—MEEKER.—In Lecompte, Louisiana, on Wednesday, January 25th, Mr. James D. Hanlon and Miss Matilda Meeker, daughter of Dr. Samuel F. Meeker.

SMITH—SHEA.—In Brooklyn, on Tuesday, January 24th, Dr. Isaac Beckett Smith and Miss Loretta Shea.

SUTPHEN—BLANCHARD.—In North Conway, New Hampshire, on Tuesday, September 21, 1897, Dr. Carlyle E. Sutphen and Miss Edna Ethel Blanchard.

WEIST—CILLEY.—In New York, on Wednesday, January 25th, Dr. Henry H. Weist, of Richmond, Indiana, and Miss Alice Longfellow Cilley.

YANDELL—WILSON.—In Canton, Mississippi, on Saturday, January 21st, Dr. William M. Yandell and Miss Nellie Moore Wilson.

Died.

CULVER.—In Albany, on Monday, January 23d, Cyrus Lee Culver, son of Dr. Charles M. Culver.

LOCKWOOD.—In Charleston, South Carolina, on Saturday, January 21st, Dr. Joseph D. Lockwood, in the forty-third year of his age.

LYTLE.—In Princeton, N. J., on Sunday, January 22d, Dr. William J. Lytle, aged seventy-five years.

McMILLAN.—In Biloxi, Mississippi, on Friday, January 27th, Dr. W. P. McMillan, aged sixty-eight years.

SKINNER.—In Detroit, on Tuesday, January 24th, Dr. Eugene Carroll Skinner, in the fifty-ninth year of his age.

SMITH.—In New York, on Saturday, January 28th, Dr. Judson C. Smith, in the thirty-third year of his age.

TAYLOR.—In Los Angeles, California, on Wednesday, January 25th, Dr. Charles Fayette Taylor, in the seventy-third year of his age.

Obituaries.

CHARLES FAYETTE TAYLOR, M.D.

DR. TAYLOR, who died in Los Angeles on January 25th, retired from a practice more than a decade ago. Up to that time he was active and progressive in the cultivation of orthopaedic surgery in New York. It was to his efforts that was due the establishment of the New York Orthopaedic Dispensary and Hospital. He contributed largely to the literature of orthopaedics and of the therapeutical employment of electricity, and invented a number of original and valuable mechanical appliances for the correction of deformities.

Dr. Taylor was born in Vermont. He was in his seventy-second year at the time of his death, which is said to have been occasioned by pneumonia. He was a

graduate of the medical department of the University of Vermont, of the class of 1856. He was as much esteemed for his manly and genial qualities as for his professional attainments. In accordance with his earnest wish, his remains were cremated.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

IV.

THE RIGHT TO PRACTISE MEDICINE AND SURGERY.

(Continued from page 133.)

A Medical College can not Arbitrarily Refuse Examination.—While the following illustration is not strictly pertinent to the subject in consideration, it shows how the courts apply the policy above illustrated to protect students from the arbitrary action of medical colleges as well as applicants from the unjust discrimination of examining boards. A medical student who had paid his fees and fulfilled all of the other conditions entitling him to present himself for final examination, was informed by the secretary of the faculty that he would not be allowed to present himself for final examination, nor would he be granted a degree of doctor of medicine. Upon a writ of mandamus the matter was brought before the court and an order issued requiring the examination of the student. The opinion of the court is both interesting and instructive, and is therefore quoted from at length. "In answer to this application the respondent (the medical college) presents no ground whatever for its action, but insists that it has the right arbitrarily, without any cause, to refuse the relator (the student) his examination and degree. It seems to us clear that such a position can not for a moment be entertained. The circulars of the respondent indicate the terms upon which students will be received, and the rights which they were to acquire by reason of their compliance with the rules and regulations of the college in respect to qualifications, conduct, etc. When a student matriculates under such circumstances, it is a contract between the college and himself that, if he complies with the terms therein prescribed, he shall have the degree, which is the end to be obtained. This corporation can not take the money of the student, allow him to remain and waste his time (because it would be a waste of time if he can not get a degree) and then arbitrarily refuse, when he has completed his term of study, to confer upon him that which they have promised—namely, the degree of doctor of medicine, which authorizes him to practise that so-called science. It may be true that this court will not review the discretion of the corporation in the refusal for any reason or cause to permit a student to be examined and receive a degree; but where there is an absolute and arbitrary refusal there is no exercise of discretion. It is nothing but a willful violation of the duties which they have assumed. Such a proposition could never receive the sanction of a court in which even the semblance of justice was attempted to be administered." *

Qualification of Previous Practice.—The particular period of practice of medicine which shall be accepted by the examining board or other body having authority to grant licenses, as tantamount to a proper diploma or satisfactory examination, is fixed and described by the statute of each State recognizing such mode of qualification, and in order to determine whether in any given State a candidate is qualified by his former practice to receive a license to continue in his practice recourse must be had to the statute of that State. If by a fair interpretation of the meaning of the statute the candidate has fulfilled the requirements, nothing remains but to grant the license or certificate; if, on the other hand, it does not appear that the candidate has fulfilled the requirements of the statute, such license or certificate should be refused. A recent case of some interest arose in Rhode Island, where the law provides that a physician should have "reputably and honorably" engaged in the practice of medicine prior to January 1, 1892. The applicant, who was in the shoe business, took up the study of medicine by himself during the year 1889. In the latter part of that year he began to practise, after which time he gave his whole attention to the practice of medicine, leaving his shoe business to the management of clerks, and continued his practice up to January 1, 1892, some of his patients being satisfied with his services and some not. The court said: "There is no evidence that on January 1, 1892, he had come to be regarded by the community in which he practised as a skillful and successful practitioner, and therefore had acquired the honorable reputation as a physician necessary to qualify him to practise contemplated by statute. The decision of the health board in denying a certificate is confirmed." *

In Ohio the question arose some years after the passage of an act providing that ten years of continuous practice of medicine should qualify a physician for a continued practice, whether time spent in the practice of medicine since the act should be included as part of the ten years. The majority of the court were of the opinion it should be, and it was accordingly so held. †

Registration of Certificate.—It will be remembered that the law generally provides that the physician must register his certificate or license with some designated county officer in the county in which he resides, or, if he is a non-resident, in the county in which he intends to practise; but with the exception of one or two States the statute is silent as to the right of a physician to attend patients in counties other than the one in which his certificate is recorded. Whether or not this right does exist, and if so to what extent, is a very important question, but as the matter is regulated by statutes which differ in the several States no general rule can be laid down for all States; an examination, however, of decisions which have been rendered on the subject in several States will, it is hoped, lead to a clear understanding of the governing principle.

A case was decided in the supreme court in New York in 1890 upon the following facts: A physician, duly licensed by the State board and registered in Kings County, made numerous visits to a patient living in Westchester County. The court said: "No new registry is needed to visit a patient out of the county. The fact that a physician gives two days in a week out of his county to see patients does not make a new practice in

* *People, Cecil vs. Bellevue Hospital Medical College*, 38 N. Y. S. R., 418; 11 N. Y. Supp., 199.

* *Paquin vs. State Board of Health*, 33 Ad. R., 870.

† *Witt vs. Cutler*, 37 Ohio St., 317.

a new county, unless intended as a cover for a real change of place. It is simply practising medicine in Kings County with patients in another county." * The court intimated that the opening of an office or establishing a place of meeting patients in another county would not be a violation of the law, but no court in the State seems to have expressly committed itself to this extent.

In Texas the law requires the physician to register his certificate with the clerk of the district court in the county in which he may "reside or sojourn." Under this statute the practitioner must, upon changing his residence to another county, register his certificate again with the proper officer in the county to which he has removed.†

And so in Pennsylvania, under a similar statute, a practitioner who is properly registered in one county and opens and maintains an office in another county must register his certificate in such other county as a "sojourner."‡

It is fair to conclude from the cases considered that in all States having statutes similar to New York, providing that a license or certificate shall be granted by a State board which shall be good in any part of the State, and which must be filed with the proper county officer in the county in which the practitioner resides, the practitioner may safely have and attend patients outside of the county in which his certificate or license is filed; but it can not be safely advised that he would have the right to open an office outside of his county, or have a regular place of meeting patients without the county, or even associate himself in partnership with a physician where the partnership office was located without the county, until he had filed or registered his certificate or license in such other county.

In Indiana the license to practise is not granted by a State board and recorded in the particular county in which the physician intends to practise, but the license itself is granted by the clerk of the district court of the county in which the physician intends to practise. The law of that State is therefore construed much more strictly, necessitating that a license be taken out in every county into which the physician's practice extends.

Chief-Justice Elliott, of the supreme court of Indiana, in an opinion in which he held the law to be as above stated, expressed his opinion regarding a qualification of this construction in the following words: "It may be that there are cases where the law would hold that the statute does not apply in its full rigor, as where there is an emergency demanding prompt action, or where there is a professional visit for consultation, or the call is made because of some special skill or ability of the physician in a particular branch of his profession." §

Eight years later, in 1894, a case was decided by the appellate court of Indiana approving of Justice Elliott's remarks so far as they relate to emergency cases, but refusing to hold that the law would permit a physician to enter the county and practise "because of some special skill or ability of the physician in a particular branch of his profession." In this case the physician was called from an adjoining county to perform an amputation immediately necessary to save the patient's life,

he being the nearest physician with the requisite skill. After performing the operation he attended the patient and dressed the wound several times. The court held that, the county seat being sixteen miles away, to which place it would have been necessary to go for a license, it would have been impracticable to have obtained the license before performing the operation, and therefore the physician was legally justified in amputating the leg, but that his subsequent visits were unlawful.*

In regard to States like Indiana in which the license to practise is issued by a county officer entitling the physician to practise in that county instead of by a State officer or board, it will be necessary to procure a license in each county into which the physician's practice extends.

Excusable Failure to Register Certificate.—There are certain circumstances under which the physician is legally excusable for failing to properly file his certificate before practising. Such circumstances may result through ignorance of law or inadvertence on the part of the physician, as, where he honestly endeavored to comply with the law, but through error filed the certificate with the wrong officer.†

Or through ignorance of fact, as, where the physician delivered his certificate with the proper fee for recording the same to a third party, who promised to record it at once, but through sickness or other cause failed to keep his promise.‡

Or such circumstances may result from the neglect or carelessness of the officer whose duty it is to register the certificate, as, where the physician applied to the proper officer to be registered, but was informed by the officer that he could not register him for he had no book in which to enter the record.§

Under any of these circumstances the physician must have acted in good faith in his original endeavor to comply with the law, and if he desires the protection of the law to continue he must, as soon as he learns of the failure of his effort to comply, use all due means to secure the prompt filing or recording of his certificate.

Itinerant and Traveling Doctors. Who are.—The statutes of several States contain restrictions imposing burdens upon itinerant or traveling doctors, these statutes differing considerably in their form and manner of expression. No general rule can be given for determining who come within their scope. A statute in Texas is as follows: "From every physician, surgeon, oculist, or medical or other specialist of any kind, traveling from place to place in the practice of his profession, an annual tax of fifty dollars in each county where he may practise his profession" shall be collected. A medical specialist having two offices, one at his home and one in an adjoining county, where he met patients twice each month, is not within the meaning of this law. The court said: "Here the physician or specialist had two places of business; part of his time he spent at one and the other part of his time at the other place. This does not carry with it the idea of itinerancy, or traveling from place to place, as we understand the meaning of this term, within the provisions of the law." ||

* Board of Commissioners of Admin. Code, § Ind. App., 474.
26 N. E. Rep., 949.

† Mayor, etc., of City of New York v. Board of Health, 10 N. Y. Supp., 92.
68 N. Y. S. R., 16, 11 Misc., 13.

‡ Pettit v. State, 28 Tex. App., 31, 14 S. W. Rep., 19.

§ Parish v. Cook, 75 Cal., 439.

|| Hamilton v. State, 26 Tex. Civ. Rep., 17, 18 S. W. Rep., 838.

* Martner v. Kirk, 55 Hun., 171.

† Holland v. State, 7 Tex. App., 69.

‡ Ege v. Commonwealth, 9 Ad. R., 471.

§ Orr v. Meeks, 111 Ind., 40.

Rhode Island, among other restrictions upon the medical profession, provides that nothing shall "authorize any itinerant doctor to register or to practise medicine in any part of the State." A physician who resided in Boston, and made a specialty of the treatment of catarrh, made regular visits to Providence in the practice of his specialty. The evidence showed that he had also been accustomed to visiting Worcester, New Bedford, Springfield, and Lowell, Massachusetts. The State board of health decided that he was to be regarded as an itinerant doctor, within the meaning of the statute. Upon review of the decision by the supreme court the conclusion of the board was approved of and affirmed.*

These two cases show facts not very greatly differing, yet it is evidently between the two that the line of demarcation must be drawn.

What Constitutes Practising Medicine.—It has been observed that the law does not exclusively recognize any particular system of medicine or class of practitioners, the legal signification of the term doctor being simply a practitioner of physic. The statutes of several States have defined what shall constitute practising medicine, with a tendency to extend rather than restrict the judicial definition of the term.

It has been held that one exercising the functions of a clairvoyant in the treatment of disease is rendering "medical services."† Also one practising Christian Science comes within the meaning of the statute making it unlawful for one not duly qualified to "operate on, profess to heal, or prescribe for or otherwise treat any mental or physical ailment of another."‡ Midwifery has been held to form an important department of surgery, and to come within the meaning of an act prohibiting the practice, by persons not qualified, of medicine and surgery in any of its branches.* And so one giving electric treatment comes within the law regulating the "practice of medicine and surgery."|| And also one who professes and practises bonesetting and reducing sprains, swellings, and contractions of the sinews, by friction and fomentation, comes within the operation of the statute regulating the "practice of physic and surgery."‡

While the definitions given seem plain and explicit, it is often a very nice question whether one, not having the legal qualification to practise medicine and surgery, has performed acts which will render him amenable to the law. Whether or not a particular case comes within the law is usually a question of fact for the jury to determine. Upon what evidence a jury will find that one has or has not practised medicine it is impossible to say with any degree of certainty, there being so many things, aside from the testimony given, that the jury may take into consideration. The best manner of illustrating this is by examining the facts upon which juries have passed and considering their verdicts.

Illustrations.—In the case of *Richardson vs. State*, decided in Arkansas in 1886, the State introduced the following evidence to show that the defendant practised medicine:

Mrs. Alice Stewart said: "I am acquainted with J. K. Richardson. I was acquainted with Mrs. Hattie Goff. I was present on two occasions when J. K. Rich-

ardson was at Mrs. Goff's when Mrs. Goff requested me to get some money of hers and give it to J. K. Richardson. Mrs. Goff was afflicted with dropsy and cancer. Dr. Brandon treated her for dropsy. I saw J. K. Richardson there with Dr. Brandon at Mrs. Goff's several times, with H. Brandon. J. K. Richardson came several times by himself and applied medicine and plasters to Mrs. Goff's cancer. I understood that J. K. Richardson had charge of the money that I handed him at the request of Mrs. Goff." Upon cross-examination witness said: "I might have sworn on the trial before of this cause, that I did not know anything about a contract with J. K. Richardson and Mrs. Goff."

The defendant offered in his behalf a deposition by H. Brandon, who said: "That during the fall and summer of last year (1885) I was practising medicine in the city of Eureka Springs, Arkansas. That while there, perhaps in the latter part of September or October, 1885, I met Dr. J. K. Richardson, who was not eligible to the practice of medicine. At the time he spoke to me he claimed to be a student of medicine, and said he wished to continue his studies under me; that if I would furnish him the books, and give him all the instructions I could, he would compensate me as much as he could; said he had but little money, but was in possession of a very excellent remedy for curing cancer. I told him if he would give me his treatment for cancer that I would get the books and take him as a student and give him instructions as much as possible, to which we agreed. He then went into my office as a student of medicine. While he was with me I treated several cases of cancer, among whom was a Mrs. Goff. I agreed to doctor her for five dollars a week, which she paid. At different times I told Dr. Richardson to go and see the case and report to me the condition of the same. I told him on several occasions that if any one wanted to pay him any money he might receive it and report the same to me, which he did on one or two occasions. Mrs. Goff paid him some money, which he turned over to me. Dr. Richardson never collected any money that he did not turn over to me while he was in my office to my knowledge."

In this case the jury apparently disregarded the deposition of Dr. Brandon and, looking alone to the evidence given on behalf of the State, found that the defendant treated Mrs. Goff for a certain disease and received money for the same.*

In the case of *Nelson vs. State*, decided in Alabama in 1893, the evidence showed that the defendant, being called to attend a child who was sick, responded to the call and administered medicines; that he called once or twice, but did not make any charge and did not receive any pay; that he was called doctor by his neighbors. Defendant in his own behalf testified that he called upon the child and administered certain herbs that he found in the woods; that he did not claim to be a physician or represent himself to be one, and that he made no charge for his visits, and received nothing therefor. The jury found the defendant guilty of practising medicine; but the supreme court, in reviewing the case on appeal, reversed the judgment and sent the case back to the circuit court for a new trial.

Justice Coleman, in delivering the opinion, said: "It was the duty of the court to instruct the jury, as a matter of law, what acts amounted to a violation of the statute, and it was for the jury to ascertain whether the facts existed. We are of the opinion that it is not a violation

* *Evans vs. State Board of Health*, 33 Atl. R., 878 (R. I.).

† *Belcher vs. Simpson*, 59 Me., 181.

‡ *State vs. Howell*, 16 Neb., 158; 58 N. W. Rep., 728.

§ *People vs. Arendt*, 60 Ill. App., 89.

|| *Davidson vs. Goldmann*, 37 Mo. App., 576.

¶ *Hewitt vs. Charier*, 16 Pick., 353.

* *Richardson vs. State*, 47 Ark., 562.

of the statute for a person who does not solicit patronage, who does not hold himself out as a physician, and does not pretend to be a physician, but simply advises or gives medicine to sick persons, merely as a neighbor or friend, and makes no charge, and does not expect any compensation for his services.*

In the case of *State vs. Hale*, tried in Missouri in 1852, the evidence did not show that the defendant received any compensation for the services in question. The court refused to instruct the jury "that unless they believed from the evidence that the defendant received compensation for his services as a physician, that they must find him not guilty," but instructed "that unless the jury believes from the evidence that the defendant practised medicine for compensation and reward, then he is not guilty, but the State is not required to prove the actual receipt of such compensation," upon which instruction the jury found the defendant guilty. The statute upon which this prosecution was based was as follows: "No person or copartnership of persons shall follow the practice of law or medicine, in whole or in part, as a business in this State without first obtaining a license to follow such profession according to the provisions of this act." The supreme court, in reviewing the case on appeal, held that the instruction given to the jury by the trial court correctly stated the law applicable to the case.†

It will be observed from these illustrations that in all three cases the juries found the defendants guilty. In the *Richardson* case the supreme court, upon appeal, criticised the verdict, and intimated that it was an injustice, but, finding no error of law in the trial, it declined to interfere with the verdict. In the *Nelson* case the supreme court found that the trial judge had erred in giving or refusing to give certain instructions to the jury, and therefore sent the case back for a new trial with statements of law relative to the evidence adduced, which probably resulted in a different verdict on the new trial. While in the *Hale* case the supreme court expressed its approval of the instruction given, and affirmed the judgment without any comments upon the verdict.

A case apparently in conflict with the *Hale* case comes from Rhode Island; the *Rhode Island* case is, however, based upon a statute providing that the unqualified practitioner shall not practise medicine or surgery "for reward or compensation." Under such a statute the instruction that "if the jury find that the defendant received no reward or compensation for his services, they must find for the defendant," is proper, and the court would commit an error if he refused to give such an instruction.‡

In view, however, of the statute existing in Rhode Island there is nothing in this case really in conflict with the law as expressed in *State vs. Hale*.

In the case of *Benham vs. State*, arising in Indiana, the evidence showed that the defendant issued circulars signed Dr. —, in which he claimed that his "treatment" of his "patients" would effect a "complete cure" of the opium habit. He also issued a number of letters from former patients addressed to him as "Doctor," testifying to the efficacy and success of his "treatment" of the opium habit. The heading of the letters and receipts given by him to his patients was: "Office of Dr.

—, No. — Street. —, Indiana." The counsel for defendant contended that the opium habit was not a disease; the jury, however, rendered a verdict of guilty, and the supreme court, upon reviewing the case, was of the opinion that the verdict was fairly sustained by the evidence.*

In a Michigan case, a party who exhibited upon a sign "Dr. —, Magnetic Healer," and who was called to visit and treat sick persons, and who made a certificate of death and a report of infectious diseases, was found to be holding himself forth as a medical practitioner.†

The selling of patent or proprietary medicines by one who does not pretend to diagnose a disease is in no way a violation of an act prohibiting the practice of medicine and surgery; yet if one examines patients, diagnoses their diseases, and then prescribes or sells his own proprietary remedies, he is practising medicine, notwithstanding the ostensible and apparent motive of the defendant may be the sale of his medicines.‡

And a man who travels from place to place with a band of music or other means of collecting people together for the purpose of selling them medicines, and in his speeches, advertisements, and pamphlets sets forth the symptoms of disease and prescribes ten different remedies as capable of curing all of such diseases, is practising medicine.§

In 1831 the supreme court of Ohio held that prescribing and administering medicine to two people for a fee sufficiently shows the party to have acted in the capacity of a physician.¶ And in 1879 the court of appeals of Texas held that the proof of attending and prescribing for a single case by one not legally qualified to practise medicine was sufficient to support a conviction for unlawfully practising medicine.‡

In accordance with the spirit manifested in the above decision, the supreme court of Nova Scotia held that one who applied plasters to tumors and cancers and gave directions for poulticing them was practising medicine.‡

It will be clearly seen from the preceding illustrations that it is the policy of the law to protect the people from the ignorance and unskillfulness of the pretender or quack in all branches of medicine. The law does not, however, go to the extent of including within its restrictions one who professes to cure by manipulation of the hands, by rubbing, kneading, and pressure, such treatment being considered by the courts to be harmless, if not beneficial, and to not come within the scope of the practice of either medicine or surgery.‡

In the trial of a case in the United States circuit court, of the sort above considered, the question arose whether or not the patient, who was called as a witness, could be compelled to produce the medicine he had received from the defendant charged with practising medicine unlawfully. The court held that he could not. Had, however, the case been one of a different sort, it is altogether probable that he would have been required to produce the medicine.‡

* *Benham vs. State*, 156 Ind. 111, 18 N. E. 2d 111.

† *People vs. Phillips*, 20 Mich. 1, 18 N. W. Rep. 88.

‡ *State vs. Allen*, 100 N. C. 381, 11 S. E. 100.

§ *People vs. Rice*, 10 Mich. 1, 18 N. W. 100.

¶ *Johnson vs. State*, 10 Tex. 1, 18 S. W. 100.

‡ *People vs. Phillips*, 20 Mich. 1, 18 N. W. 100.

‡ *Smith vs. State*, 10 Mich. 1, 18 N. W. 100.

‡ *United States vs. Williams*, 10 Mich. 1, 18 N. W. 100.

* *Nelson vs. State*, 97 Mo. 79, 13 So. Rep. 111.

† *State vs. Hale*, 15 Mo. 607.

‡ *State vs. Pugh*, 28 Ark. R. 656 (R. L.).

Emergency Cases.—The statutes of many States except from their operation services rendered in case of emergency. The question of what is an emergency was considered by the supreme court of California, in 1886, in the case of *People vs. Lee Wah*.

In this case two women who had been unable to obtain relief from their physicians called upon defendant and stated their ailments. He prepared herbs of his own selection and delivered them to the women, who took them as directed. The instructions given by the trial judge to the jury, which were approved by the supreme court, state the law fully as to what is an emergency. The following is an extract from these instructions: "Two ladies have testified before you and stated that their condition was deplorable; that they consulted in vain other physicians; and that they regarded themselves, and were regarded by their friends and physicians, as incurable, and that they repaired to this defendant as a last resort. The ladies stated upon their part it was an emergency—an exigency in which death on the one hand, and submitting themselves to that treatment on the other, were the only alternatives. I instruct you that the emergency contemplated by the statute is not such as this case suggests. It means a case in which the ordinary medical practitioners of the schools provided for by the statutes, who are provided with the proper diplomas, and have submitted themselves to the proper examination, are not readily obtainable. This is an emergency—as where the exigency is of so pressing a character that some kind of action must be taken before such parties can be found. . . . If, however, a party is satisfied that another school of physicians or another individual can render him more efficient aid—more beneficial services than others—and he therefore seeks his aid, that is not such an emergency as the statute contemplates."*

License from Irregularly appointed Board.—A physician can not be prosecuted for practising medicine and surgery unlawfully because his license is granted by a board of medical examiners which is improperly constituted, the appointment of the members being irregular, or even unconstitutional. Such a body would be a *de facto* board, and the certificates or licenses issued by it would be sufficient to protect the parties to whom they were issued from prosecution under the statute.†

Improper Refusal of Certificate no Defense.—In a prosecution for practising medicine and surgery without a certificate the defendant can not show as a defense that the board of examiners acted improperly or unlawfully in refusing to grant him a certificate.‡

(To be continued.)

Book Notices.

A System of Practical Medicine. By American Authors. Edited by ALFRED LEE LOOMIS, M. D., LL. D., Late Professor of Pathology and Practical Medicine in the New York University, and WILLIAM GILMAN THOMPSON, M. D., Professor of Medicine in the Cor-

nell University Medical College, etc. Volume IV. Diseases of the Nervous System and Mind—Vasomotor and Trophic Disorders—Diseases of the Muscles—Osteomalacia—Rhachitis—Rheumatism—Arthritis—Gout—Lithæmia—Obesity—Scurvy—Addison's Disease. Illustrated. Lea Brothers & Co., 1898. Pp. 5 to 1120.

THE fourth and concluding volume of this excellent *System* is devoted largely to a consideration of the disorders of the mind and nervous system, and the articles throughout the volume are of that high order of excellence which has characterized the work from its inception.

The peripheral nerves and their diseases are first considered, and then there are chapters upon the spinal cord. Noteworthy among them is one upon the diagnosis and localization of spinal-cord diseases. Indeed, this chapter and that upon cerebral localization are among the most striking of the volume. Another chapter which should be cited in particular is the very complete and excellent presentation of neurasthenia. It is not easy, however, to cite instances of unusual merit in this volume, for throughout there is an evenness about it which, being an evenness of a superior order, is delightful. Exhaustiveness, too, is an attribute of this volume; nervous and mental diseases have seldom received a more ample exposition. The volume is concluded with a number of the usually "unclassified" diseases, which naturally include osteomalacia, rickets, rheumatism, gonorrhœal arthritis, arthritis deformans, gout, lithæmia, obesity, scurvy, and Addison's disease. The illustrations are noteworthy, especially those diagrams which concern brain and cord localization.

In conclusion, we are glad to express our satisfaction and approval in connection with this system. It can scarcely fail, we think, to receive a warm and general approval.

A System of Medicine. By Many Writers. Edited by THOMAS CLIFFORD ALBUTT, M. A., M. D., F. R. C. P., F. R. S., F. L. S., F. S. A., Regius Professor of Physic in the University of Cambridge, etc. Volume VI. New York and London: The Macmillan Company, 1898. Pp. xii-1058. [Price, \$5.]

IN the sixth volume of Allbutt's *System* the study of respiratory disorders is completed and the consideration of circulatory diseases is entered upon. Bronchitis in its varying forms is first presented, and most ably. Disorders so well known as the bronchitides are scarcely susceptible of very unconventional handling, and good arrangement and completeness are the qualities most required. In the present instance both are noticeable. A chapter upon bronchiectasis, which follows, is the best presentation of the subject that we have seen and highly exhaustive. The pneumonias follow, and then pulmonary phthisis. The considerations of these subjects are quite what (by this time) everybody would expect of anything contained in this system. Indeed, the work of the reviewer in the case of this production is rather difficult, for, having once called attention to the exhaustiveness and ability, and above all the evenness, of the work, he can do nothing save to pick flaws—if, indeed, they can be found. Pneumoconiosis, pulmonary aspergillosis (a rare condition well described), pulmonary emphysema, asthma, and hay fever, syphilitic disease of the lungs, and the consideration of the pulmonary dis-

* *People vs. Lee Wah*, 71 Cal., 80; 11 Pac. Rep., 841.

† *Brown vs. People*, 11 Colo., 169; 17 Pac. Rep., 104; *Harding vs. People*, 16 Colo., 387; 15 Pac. Rep., 727.

‡ *Kroenstat vs. State*, 15 Ohio Cir. C. R., 73.

The plenritic diseases form the subject of the succeeding section.

The sections upon the circulatory diseases are begun with generalizations upon the blood and a discussion of its clinical examination, which are direct and simple—as they should be—and therefore useful and somewhat unusual. A chapter follows upon cardiac physics, and here again we have an example of that excellent feature of this *System*, the use of physiological introductions and generalizations as preparatory to the study of the various organs when diseased. Could anything be better calculated to aid the student?

Chlorosis is the first disorder we meet with among the circulatory diseases, and then come pernicious anæmia, splenic anæmia, hæmophilia, hæmorrhages in newborn children, purpura, scurvy, hæmoglobinuria, leucocythæmia, and dropsy. The arrangement of these disorders is somewhat peculiar and rather awkward, but the subject matter is the reflection of the most modern thought and research.

The diseases of the heart itself are next taken up. They include congenital malformations, the diseases of the pericardium (a chapter beyond praise), functional disorders of the heart, mechanical strain of the heart, and injuries by electric currents of high pressure. Simple and infective endocarditis come next, and, with the diseases of the myocardium, constitute the basis for the regional study of cardiac disease. The chapters which conclude this volume are devoted to this study and concern the aortic area of the heart and the mitral valve respectively.

La Chirurgie intramédiastinale postérieure. Avec figures dans le texte. Par Dr. J. POTARCA (de Bucharest). Paris: Carré et C. Naud, 1898. Pp. 110.

THE author of this interesting surgical monograph has made important anatomical studies of the relations of the pleural cavities to the structures contained in the posterior mediastinum and their operative accessibility. In connection with these studies, and to illustrate them, a considerable number of the recorded cases of operative procedures on the esophagus and bronchi by the posterior route has been collected from literature and are thus rendered easily accessible to the reader. The subjects treated of are chiefly the removal of foreign bodies from the esophagus and bronchi and the treatment of strictures and new growths of the esophagus. Mediastinal abscesses and tumors are also considered as within the realm of surgical interference.

William Stokes, His Life and Work (1891-1898).
By his Son, WILLIAM STOKES, Surgeon in Ordinary
to the Queen in Ireland. New York: Leonard
Green, & Co., 1898. Pp. 9 to 256.

There is a story told which any one might read to his benefit and which the youthful medical man would do well to be guided by. The life of Stokes was full of lofty ambition and of purpose, and, since able to do so, was his, the achievement of success could not but follow. Although his medical life was well rounded and complete and he was both teacher and practitioner, it was in the former capacity that he was preeminent, not only because of his masterly writings upon thoracic diseases

but even more because of the methods of clinical teaching which he introduced. Already the teachings of Laennec had revolutionized the diagnostic art, but the subject had by no means been exhausted, and there was a field in which the peculiar talents of Stokes were well fitted to busy themselves and whence there came his elaboration of physical diagnosis.

The lives of great men are necessarily interesting in a measure, for success is ordinarily attractive to contemplate for itself, but interest and admiration in these cases are often wide apart. It is not so in the case of Stokes, for, while our interest indeed is aroused by the story of his life, our regard, too, is equally great. There was something so manly and so noble in his nature, and at the same time so gentle, that we can not wonder at his having been beloved, since even to read the story of his life is to conceive an affection for him. A beautiful story, however, may be spoiled in the telling, but such is not the case here, for the simplicity and beauty of the narrative are thoroughly in harmony with its subject and unite with it to produce the pleasure a reading of the book affords. It is one that medical men would do well to read.

Sir Benjamin Collins Brodie. By TIMOTHY HOLMES, M. A., F. R. C. S. New York: Longmans, Green, & Co., 1898. Pp. 9 to 256.

THE life of Sir Benjamin Brodie has well been made the subject of a volume in the *Masters of Medicine* series, for, while his was no career of startling discovery or in any sense epoch-making, it was one of earnest purpose crowned with success, and one, moreover, of a time sufficiently recent to permit of a sympathetic reading.

Brodie's character was firm to the point of sternness, and determination marked his career throughout. It is true he did not have to contend against the obstacles that in so many lives have retarded or prevented success, yet all that came to him was from his own endeavor. The life that was Brodie's is capable of duplication in our time, and in fact we see from time to time professional careers which remind us of his, lives of men who have risen to contemporary eminence and success as practitioners and teachers, rather than lives in any more brilliant and lasting sense remarkable. A master of medicine in the former class Brodie unquestionably was, and his biography can not but invite and help others of like purpose.

The Pocket Encyclopedia for the Treatment of Disease in Children. By EDWARD FRYMANTER, M. D., Vienna, M. R. C. P. Lond., M. R. C. S., Eng., Clinical Assistant, Hospital for Sick Children, Great Ormond Street, etc. London: The Reuben Publishers' Company, Ltd., 1898. Pp. i+xx+208.

Although all formulae are fairly easy to use, the use of this little book, the name *Formulae*, is fairly self-explanatory, for its contents are formulae. The title is thereby implied. The book is divided into 10 chapters, on the plan of what is ordinarily known as a pharmacopoeia, and consists of a pharmacopoeia and a collection of the drugs useful in the diseases of the tropics. The chapters—and all of them are of considerable value—are: general, elementary, are arranged alphabetically, and are arranged successively to tell its contents, and the first chapter, on dose, and on pathology, is a very good introduction, and also useful formulae for the treatment of the various

given as the means for correcting ill taste. In an appendix are lists of drugs suitable for lotions, sprays, gargles, and the like, with the proper strength of solution indicated. A therapeutic index concludes the book, and in that, under headings of disorders, are listed the drugs useful for each. A not unimportant inclusion is a number of blank pages at the end of the book, on which additional data may be written as occasion arises.

The plan of the book, it will be seen, is eminently practical, and, since the choice of remedies is thoroughly good and the information concerning them well presented, it must be found useful in no ordinary degree.

A Text-book of Mechano-therapy (Massage and Medical Gymnastics). Especially prepared for the Use of Medical Students and Trained Nurses. By AXEL V. GRAFSTROM, B. Sc., M. D., Late House Physician, City Hospital, Blackwell's Island, etc. With Eleven Pen-and-Ink Sketches by the Author. New York: O. M. Fœgri & Co., 1898. Pp. 5 to 139.

A VERY satisfactory little work is this of Dr. Grafstrom's, and one which certainly fulfills its mission in rendering comprehensible the subjects of massage and medical gymnastics to medical minds other than those of specialists.

After a brief chapter of definition and classification, the effects of muscular action upon the body are taken up, and then there is a consideration of medical gymnastics in detail. These details cover the various parts of the body where gymnastic exercises are employed, and brief though complete directions are given for their performance. The practice of massage is next described in its several varieties.

To the medical man the concluding chapters, which discuss the therapeutics of massage and gymnastics, will naturally be of the greater interest, and in them there is much profit to be found. These chapters are much condensed, as are all the book contains; indeed, its brevity is its chief fault, and we could welcome a more extended treatise upon these subjects from Dr. Grafstrom, in view of the ability wherewith he handles his subject, and especially of the well-balanced conservatism he manifests in matters where enthusiasm is prone to be extravagant.

Handbook of Materia Medica for Trained Nurses. Including Sections on Therapeutics and Toxicology, and a Glossary of Terms with Dose and Use of each Drug. By JOHN E. GORF, Ph. C., Apothecary in the Rhode Island Hospital, Providence. Philadelphia: P. Blakiston's Son & Co., 1898. Pp. viii 9 to 235. [Price, \$1.25.]

This volume has been written for the purpose of instructing nurses in the nomenclature, the chemical structure, and the handling of drugs. It contains also a very complete glossary and an appendix on poisons and antidotes. The printing and binding are excellent, and it seems to be a very good text-book for the purpose for which it was written.

BOOKS, ETC., RECEIVED.

Thirty-fourth Annual Report of the Trustees of the Boston City Hospital, with Report of the Superintendent, the Medical and Surgical Statistics, House Rules, Rule for Admission, Discharge, and Government of Patient, a Prospectus of Training School for Nurses, etc. February 1, 1897, to January 31, 1898, inclusive.

Annual and Analytical Cyclopædia of Practical Medicine. By Charles E. de M. Sajous, M. D., and One Hundred Associate Editors, assisted by Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromolithographs, Engravings, and Maps. Volume II. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. viii-667.

Les glycosuries non diabétiques. Par Germain Roque, Professeur agrégé à la Faculté de médecine, etc. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 92.

La pulsation du pied. Essai sur un nouveau signe clinique. Par le Docteur Silvio Tatti, Directeur du laboratoire de l'Hôpital Rivadavia, etc. Buenos Aires: J. Peuser, 1898. Pp. 3 to 44.

Il principio della dirigibilità orizzontale degli aerostati ed il binarostello. Mario Schiavone. Potenza: Garramone e Marchesio, 1898. Pp. 5 to 48.

Report of the Surgeon-General of the Army to the Secretary of War, for the Fiscal Year ending June 30, 1898.

Twenty-sixth Annual Report of the State Charities Association to the State Board of Charities of the State of New York. November 1, 1898. No. 70.

The American Medical Association: Its Past, Present, and Future. The Presidential Address. By N. Senn, M. D., of Chicago. [Reprinted from the *Journal of the American Medical Association*.]

Intestinal Tuberculosis: Etiology, Pathology, and Diagnosis; Surgical Treatment. By N. Senn, M. D. [Reprinted from the *Journal of the American Medical Association*.]

The Modern Treatment of Gunshot Wounds in Military Practice. By N. Senn, M. D. [Reprinted from the *Journal of the American Medical Association*.]

The Etiology and Classification of Cystitis. By N. Senn, M. D. [Reprinted from *International Clinics*.]

On the Frequency of Varicocele and the Limitations of Operative Treatment for this Affection. By N. Senn, M. D. [Reprinted from the *Philadelphia Medical Journal*.]

Edematous Changes in the Epithelium of the Cornea in a Case of Uveitis following Gonorrheal Ophthalmia. By Edward Sieren, M. D., of Pittsburgh. [Reprinted from the *Johns Hopkins Hospital Bulletin*.]

Odor as a Symptom of Disease. By J. H. McCassy, M. D., of Dayton, Ohio. [Reprinted from the *Medical Age*.]

The Milk Supply of Cities: Can it be Improved? By Henry O. Marey, M. D., of Boston. [Reprinted from the *Journal of the American Medical Association*.]

The Elimination of Bacteria from the General Circulation by the Liver and through the Bile Passages. A Claim for Priority in Stating the Presence of the *Bacillus typhi abdominalis* in the Gall Bladder. By Gustav Fütterer, M. D. [Reprinted from *Medicine*.]

How soon do Bacteria which Enter the Portal Vein become Disseminated throughout the System, and when does their Elimination Commence? By Gustav Fütterer, M. D. [Reprinted from *Medicine*.]

Primary Carcinoma of the Gall Bladder. By Gustav Fütterer, M. D. [Reprinted from *Medicine*.]

Ein Beitrag zur Frage der Übertragbarkeit von Warzen. Von Dr. Otto Lanz. [Separatdruck aus dem *Correspondenz-Blatt für Schweizer Aerzte*.]

Eine Beobachtung von Phlogococcus-Strangitis. Von Dr. Otto Lanz. [Separatdruck aus dem *Correspondenz-Blatt für Schweizer Aerzte*.]

Miscellany.

Salophene.—M. Creslé (*Gazette hebdomadaire de médecine et de chirurgie*, December 18, 1898), in a thesis before the faculty of Toulouse, considers salophene as now definitely settled in the therapeutic domain. It exerts, he says, an incontestable action upon acute and sub-acute rheumatism, but its effects are less constant than those of salicylate of sodium. In chronic and hemorrhagic rheumatism it has not shown itself superior to other drugs. Salophene possesses a powerful analgesic action which is exercised even in those cases where this drug can not be looked for to effect a cure. It has given good results in migraine, in various neuralgias, and in sciatica. Salophene employed in a medium dose produces no phenomena of intolerance, nor does it cause headache, buzzing in the ears, or troubles of vision, but tolerance appears to be rapidly induced. In certain cutaneous affections salophene appears to have some efficacy, but it is necessary to wait for further experience. The medium dose of salophene is sixty grains daily, more or less, according to the gravity of the complaint.

The Bacteriology of Erysipelas.—Dr. Leonard Freeman (*Colorado Medical Journal*, December, 1898) says that in every case of erysipelas, according to Unna, both the cutis and the subcutaneous tissues are involved, the latter more extensively even than the former, contrary to the usual teaching. The streptococci occupy primarily, and almost exclusively, the lymph spaces and vessels, invading the adjacent tissues in the more severe cases only. The lymph channels surrounding the larger blood-vessels of the hypoderm are favorite localities for the accumulation of bacteria, which, however, seldom if ever penetrate more deeply than the outer layers of the adventitia, although they have occasionally been found in the blood. Immense numbers are also found in the connective tissue and about the capillaries surrounding the fat lobules. In the hypoderm the cocci are more widely distributed, with less tendency to the formation of long chains than in the cutis; this being due, perhaps, to the fact that their growth in the former situation is more or less interfered with by the greater number of leucocytes. In the cutis the disease runs its course much more rapidly than in the subcutaneous tissues, so that microscopical sections of the skin made somewhat late during the course of the affection may show microorganisms in the hypoderm alone.

The changes in the blood-vessels are of prime importance, and serve to explain much that seems obscure. They are decidedly more pronounced in the cutis than in the subjacent tissues. In the cutis, the bacterial poisons, by their action upon the plasma of the blood, cause the formation of a rapidly coagulating fibrous substance which produces thrombi, particularly in the arterioles and capillaries. In the smaller veins, when thrombi appear, they are usually washed in from the capillaries. In the veins, however, the leucocytes become adherent in clumps, not along the walls of the vessel, but in the centre of the blood stream. The vessels become paralyzed, widened, and choked with red corpuscles, and stasis occurs. Although the number of leucocytes is considerably increased, and their vitality apparently unimpaired, there is comparatively little tendency to emigration through the vessel walls, owing to the extraordinary conditions just mentioned, and to the well-known feeble leucocytic powers of the streptococcus. Since the

cient numbers escape, however, to fill the normal lymph channels, but they seldom appear in any quantity in the surrounding tissues. Hence, in the cutis, we can not speak of a local leucocytosis. There is a marked exudation of fluid, due largely to venous stasis, which fills the lymph channels and escapes, in the more severe cases, into the intervening connective tissue. This at once coagulates, inclosing in its meshwork of fibres both leucocytes and cocci. In the subcutaneous tissues stasis is not so prominent a feature, and thrombosis seldom occurs, although there is free exudation and coagulation of fibrin, which extensively invades the fat lobules and their surrounding connective tissue. The migration of leucocytes, although more extensive than occurs in the cutis, is not a marked feature. Nevertheless large numbers of these corpuscles are found in the lymph channels around the larger vessels, in the connective tissue between the fat lobules, and, in fact, distributed more or less generally throughout the tissues. This is accounted for by the fact that a considerable proportion of the leucocytes is brought from the cutis through lymph channels which end in the hypoderm.

In cases of simple erysipelas this "leucocytosis" disappears without making itself macroscopically evident; but where the inflammation is more severe suppuration manifests itself, although it is not so profuse as when a mixed infection with staphylococci is present, or when a staphylococcus infection alone exists. Streaks of purulent material form in the septa between the fat lobules, composed of a mass of leucocytes, liberated fat and protoplasm, cocci and fibrin.

Much discussion has taken place regarding the mutual relations between leucocytes and cocci. Metschnikoff and his followers believe that a "battle" is waged between the cells and the bacteria. When the former become the victors the cocci are "swallowed" and killed; when the latter conquer, the leucocytes become disintegrated. Baumgarten and others have strongly combated this theory, and the majority of facts seem to be upon their side. If Metschnikoff's idea is correct, we should expect to find the advance of the streptococci met by a wall of leucocytes, as in a staphylococcus inflammation; but this is not the case. The bacteria spread on in advance, and the so-called phagocytes bring up the rear. In fact, a "wall" of cocci is often seen surrounding a mass of leucocytes. According to Unna, the occasional presence of bacteria within the bodies of the leucocytes necessarily means neither the death of the cocci nor the disintegration of the corpuscles. The streptococci, on the other hand, perish in great numbers over large areas whether leucocytes are present or not, "the conquerors often dying in the midst of the conquered," their death being due, probably, to the saturation of the diseased tissue with poisons. In like manner, the degeneration of large numbers of leucocytes may take place without the direct intervention of microorganisms. As regards the cutis alone, there can be no doubt that in this there is no local leucocytosis, and no metastream, where leucocytes exist in great numbers the streptococci seem to thrive best.

Since the migration of leucocytes, as Koch, it has been almost universally held, is toward the center of the "red zone," and since cocci are found in considerable numbers in the outer borders of the "red zone" only, it is not surprising that especially toward the center of the "red zone" a few cocci are found. According to the same author, to a certain extent of the cutis, the leucocytes are found to find numbers of leucocytes in the metastream.

tainly not hold good where the hypoderm is concerned, for in this region swarms of streptococci exist everywhere.

From a histological standpoint, degenerative changes of two kinds may take place—softening and coagulation. They are due to the action of bacterial poisons and to thrombosis within the blood-vessels. If the disease is sufficiently active, degeneration may end in the production of a mushy necrotic mass, which occurs, however, in limited areas only. In coagulation the entire connective tissue seems to become transformed into a fibrinous network, inclosing bacteria and leucocytes, and resembling a diphtheritic membrane.

Vesicles are formed by the separation of the epithelium from the papillary layer of the skin; seldom if ever by liquefaction of the epithelium itself, as claimed by Wagner. The vesicles contain numerous leucocytes and considerable fibrin, but cocci are seldom found. Curiously enough, the deep epithelium, and that in connection with the glandular structures, suffer less than the superficial.

Phegmonous erysipelas does not differ essentially from the ordinary form. In fact, every simple erysipelas is essentially "phegmonous" in that the subcutaneous tissues are filled with leucocytes, although pus may not be macroscopically evident. Much depends upon the resistance of the tissues and the virulence of the cocci, factors which vary considerably in different cases, as has been emphasized by Petruschky. This does not exclude the possibility of a mixed infection with staphylococci, especially in cases of profuse suppuration. Staphylococci alone, however, can not cause an extensive spreading suppuration any more than they can cause an erysipelas.

Progressive phegmonous inflammations, with edema, extensive suppuration and sepsis, but without redness of the skin, are probably erysipelatous in their nature and caused by the same micro-organism. The virulence of the infective process is such that extensive thrombosis of the blood-vessels of the cutis results, effectually preventing the redness so characteristic of ordinary erysipelas. For the same reason, necrosis of the skin is apt to supervene.

Sporadic elephantiasis nostras is closely related to erysipelas. Repeated attacks of the latter disease cause circulatory disturbances which prevent complete resorption. A certain number of streptococci seem to remain more or less permanently within the tissues. The process is similar, in some respects, to so-called chronic erysipelas.

To epitomize: Typical erysipelas of the cutis is a simple sero-fibrinous inflammation, which may result in necrosis. In the subcutaneous tissues the disease is apt to become fibro-purulent, owing to the accumulation of leucocytes having their origin in both derm and hypoderm.

"Tips" for Practitioners. Dr. William Murrell, of the Westminster Hospital, London (*Medical Brief*, January), in an article on The American Physician in London, says that he endeavors to impress upon his students the importance of

1. The value of small doses of tincture of acetate of iron frequently repeated in the treatment of amygdalitis and in the initial stage of febrile disease.

2. The value of painting the chest and back with *Rhine oil* (diluted if necessary with an equal quantity of the tincture) in all cases attended with cough.

3. The value of a pill of exsiccated ferrous sulphate in conjunction with the administration of purgatives in the treatment of anæmia.

4. The value of grain doses of gray powder with an equal quantity of Dover's powder from three to six times a day in the treatment of syphilis.

5. The value of large doses of the iodides in the treatment of tertiary syphilis.

6. The value of large doses of bromide of potassium in the treatment of the "heats and flushes" and other symptoms from which women suffer about the time of the menopause.

7. The value of large doses of quinine in the treatment of supraorbital neuralgia, and in the periodical febrile disturbances from which old malarial patients suffer.

8. The value of five grains of butyl-chloral-hydrate with one two-hundredth of a grain of gelsemin in neuralgia of the fifth nerve.

9. The value of small doses of a saturated solution of camphor in alcohol in the treatment of autumnal or choleraic diarrhæa.

10. The value of small doses of perchloride of mercury in the treatment of infantile diarrhæa when the stools are green, slimy, and offensive.

11. The value of sulphide of calcium in doses of a tenth of a grain in the treatment of boils, carbuncles, and abscesses.

12. The value of nitroglycerin and nitrite of amyl in the treatment of angina pectoris and allied conditions.

13. The value of alcohol in the treatment of fevers.

14. The value of flying blisters in typhoidal conditions.

The Influence of Barometrical Pressure on Disease.

—The *Clinique* for September 15th quotes the following from a paper by Dr. T. Wesley Burwood published in the *Monthly Homœopathic Review* of London. We reproduce it, because we ourselves have more than once been engaged on a similar train of thought, and are satisfied that a careful study of barometrical pressure in relation to the ups and downs of disease, especially in chronic cases, by physicians would elucidate in time some very important factors, and would, moreover, give the physician material assistance in dealing with many peculiar cases. Dr. Burwood says:

"Toward the end of the month of January, 1882, I was brought face to face with a puzzle which gave me much personal chagrin, though it eventually has proved a source of much satisfaction, as it opened up a line of thought which to me has been very useful.

"I had been in regular attendance on a gentleman whose name is well known. He had been my patient off and on for some years for trivial ailments, and I flattered myself I knew everything it was possible to know about him; he had been a most healthy man, never having had a serious illness since childhood. His habits were those of an English gentleman, and until a few months before his death he might have been seen on horseback in 'the Row' every morning of his life when in London. He, however, toward the end showed signs of oedema in the feet due to heart trouble. There was no valvular lesion, though latterly marked dilatation was evident. There was no albumin in his urine and his present condition might be summed up as due to old age (eighty-four).

"I had seen him one day about 6 p. m.; he was jolly

Some Remedies with Fanciful Names.—In the *Dominion Medical Journal* for October there is a list, under the heading of Recent Synthetic Remedies, which, with some additions of our own (distinguished by the names being printed in italics), is substantially as follows:

Acetol.—A name given to silver lactate, which is recommended like itrol (silver citrate) as an antiseptic in gonorrhoea and gonorrhoeal ophthalmia.

Agathin — $C_6H_4.OH.CH.NN.CH_3.C_6H_5$ — Sali-cyl-*a*-methyl-phenyl-hydrazone. Antirrhematic.

Airol — $C_6H_5(OH)_4.CO_2BiI$ — Bismuthoxy-iodo-gallate. Antiseptic.

Alpha-eigon.—An iodine compound of albumin, containing twenty per cent. of albumin. Alpha-eigon-sodium is the sodium compound, soluble in water, and containing fifteen per cent. of iodine. Beta-eigon is an iodine-peptone compound.

Alumol. Aluminum naphtho-sulphonate. Astringent. Antiseptic.

Analgen — $C_9H_5(OC_2H_5)NH(CO.C_6H_5)N$ — Ortho-ethoxy-ana-mono-benzoyl-amidoquinoline. Antipyretic. Analgetic.

Antiliprine.—Obtained by melting together one part of acetanilide and two parts of antipyrine. It is fairly soluble in water, and is stated to have given good results in influenza, rheumatism, etc. The dose is from five to fifteen grains, two or three times a day.

Antiscabine.—A mixture of Peruvian balsam, Castile soap, glycerin, beta-naphthol, boric acid, and alcohol. Introduced as a remedy for scabies, to be applied two or three times a day.

Antiseptol. Cinchonine iodosulphate. Antiseptic.

Anglin.—A thirty-three-per-cent. aqueous solution of ichthyl-sulphonic acid, one of the principal constituents of ichthylol. Recommended in dermatological practice.

Argentamine.—An amido-compound of silver. It has been recommended as a substitute for nitrate of silver, being less irritating and a superior antiseptic, in conjunctival diseases.

Argonin. Silver caseinate. Antiseptic.

Aristol — $C_6H_4.CH_3.OI.C_3H_7)_2$ — Di-thymol-di-iodide. Antiseptic.

Asaprol — $CaC_{20}H_{14}S_2O_8 + 3H_2O$ — Calcium-beta-naphthol-sulphonate. Antirrhematic. Antituberculous.

Asseptol — $C_6H_5(OH)SO_3H$ — Phenol-sulphonic acid.

Benzosol — $C_6H_5(OC_2H_5)OC_6H_5CO$ — Benzoyl-guaiaacol. Antituberculous. Antiseptic.

Bismal — $H_3H_2O_9.3Bi(OH)_3$ — Bismuth methyl-ene-digallate. Astringent.

Bromol — $C_6H_4Br.O.H$ — Tri-bromo-phenol. Antiseptic and disinfectant.

Captol.—A condensation product of tannic acid and chloral. It is a dark-brown hygroscopic powder, slightly soluble in cold, more soluble in warm water and in alcohol. Recommended as an antiseptic astringent in the treatment of falling of the hair from seborrhoea, etc.

Chloralamide — $C_2H_5O.C_2H_5N$ — Chloral formamide. Hypnotic and analgetic.

Citruin. A compound (probably a mixture) of citric acid, urea, and lithium bromide, said to be useful when the effect of urea and lithium is desired.

Cresdin. Coal, colcoed, and colcol are more or less impure forms of mixture obtained from coal tar.

Crocol — $C_2H_5CH_2(OC_2H_5)OH$ — Homo pyro-catechin mono-methyl-ether. Antiseptic.

Dermatol — $Bi(OH)_2C_2H_5O_5$ — Bismuth subgallate. Astringent. Antiseptic.

Diuretin — $C_8H_7N_3O_2.Na + C_6H_4(OH)CO_2N$ — Theobromine-sodium-sali-cylate. Diuretic.

Durol — $C_6H_2CH_3CH_3CH_3CH_3$ — Tetra-methyl-benzol.

Eucaine hydrochloride — $C_{10}H_{27}NO_4.HCl + H_2O$ — Benzoyl-methyl-tetra-methyl- γ -oxy-tetra-piperidine-carbonic-methyl-ester hydrochloride. Local anæsthetic.

Euphthalmine Hydrochloride.—The amygdalic acid derivative of methyl-vinyl-diacetone alkaline, $C_{17}H_{25}NO_3.HCl$. It is colorless, crystalline, and freely soluble in water. It has a powerful mydriatic action in five- or ten-per-cent. solutions. It is asserted that its action is superior to that of homatropine.

Eurobin.—A compound of chrysarobin and acetic acid, apparently an acetate of that body, introduced as superior to chrysarobin in dermatitis, etc.

Europhene — $C_8H_9(CO_2)(O)C_6H_3C_2H_5.OI.CH_3$ — Iso-butyl ortho-cresol-iodide. Antiseptic. Antisyphilitic.

Ferrosol.—A double compound of ferric saccharate and saccharate of sodium chloride. It is a clear, dark-black liquid, strongly ferruginous and saline. Recommended in chlorosis and anæmia, in teaspoonful doses three times a day.

Gaiacyl.—The calcium salt of guaiacol sulphonic acid. It occurs as a grayish-violet powder, soluble in water and in alcohol, insoluble in oils. It is employed as a local anæsthetic in five- or ten-per-cent. solutions.

Gelante.—A new dressing recommended by Unna, prepared from tragacanth and gelatin, with the addition of a little glycerin, rose water, and a trace of thymol. Various antiseptic medicaments can be added.

Gcosote.—Guaiacol valerianate. It is an oily liquid, with a sweetish taste, and has been recommended in pulmonary catarrh, and injected subcutaneously in tuberculous glands or joints.

Guaethol or *Guithol*.—A derivative of guaiacol in which the methyl group is replaced by ethyl. It is an oily liquid, and has an aromatic odor. Its analgetic action is stated to be superior to that of guaiacol; it is used as an ointment, one part to six of vaseline.

Guaiaacol Carbonate — $C_6H_4(OCH_3)_2CO_3$ — Guaiaacol-ester carbonate. Antituberculous antiseptic.

Guaiaacol, synthetic — $C_6H_4(COH)COH_5$ — Pyrocatechin-methyl-ether. Antituberculous antiseptic.

Guaiaquin.—Obtained by the action of guaiacol-sulphonic acid on quinine. It occurs as a yellow odorless powder, with an acid bitter taste, readily soluble in water, alcohol, or acids. Recommended in anæmia, malarial disease, etc.

Heliotropine. Piperonal. Proto-catechu-aldehyde-methyl-ester. Antiseptic. Antipyretic. Used in perfumery.

Hypnal — $CCl_3CH(OH)_2C_{11}H_{12}N_2O$ — Chloral-hydrate-antipyrine. Analgetic. Antipyretic.

Hypnone — $C_6H_5CO.C_2H_5$ — Phenyl-methyl-ketone-aceto-phenone. Hypnotic.

Iodol — C_4H_7NI — Tetra-iodo-pyrrol. Antiseptic.

Irol — $Ag_2C_6H_5O_5$ — Silver citrate. Antiseptic in treatment of wounds.

Lactophenine — $C_6H_4(OC_2H_5)NH.CO.CH(OH).CH$ — Lactyl-amide phenol-ethyl-ether.

Lacto somatose. A compound of somatose and desiccated milk, asserted to be a strength-giving food, containing the albuminous matter of milk.

Loretin — $C_9H_9NI \cdot OH \cdot SO_3H$ — Ortho-oxyquinoline- μ -iodo-ana-sulphonate. Antiseptic.

Losophane — $C_6H_3 \cdot OH \cdot CH_3$ — Tri-iodo-meta-cresol. Astringent. Antiseptic.

Lycetol. Dimethyl-piperazine-tartrate. Analgetic. Diuretic.

Lysidine — $(C_2H_5)_2NH \cdot N \cdot C \cdot CH_3$ — Methyl-dihydro-glyoxaline uric acid. Solvent.

Malakin — $C_7H_5O_2N$ — Salicyl-amido-phenol-ethyl ether. Antiseptic. Analgetic.

Microidin. Sodium beta-naphtholate. Used in antiseptic surgery.

Mydrin.—A combination of ephedrine hydrochloride and homatropine, used for dilating the pupil. It is said that a ten-per-cent. aqueous solution causes mydriasis quickly, without affecting accommodation or causing discomfort.

Nosophene — $(C_6H_4I \cdot OH)_2 \cdot C \cdot C_6H_4CO \cdot O$ — Iodo-phenene. Tetra-iodo-phenol-phthalein. Antiseptic. Disinfectant.

Orthoform. Para-amido- μ -oxy-benzoic-methyl ester. Local anæsthetic.

Ossalin.—A fat prepared from fresh bone marrow, resembling lanolin in its property of absorbing water. It is neutral, grayish, and has the odor of tallow. Recommended as an ointment basis.

Peronine — $C_{17}H_{15}NO_2 \cdot O \cdot C_6H_5 \cdot CH_2 \cdot HCl$ — Benzyl-morphine-hydrochloride. Narcotic.

Phenocoll Hydrochloride— $C_6H_4(OC_2H_5)(NHCO \cdot CH_2NH_2)HCl$ — Amido-acet-phenetidine-hydrochloride. Analgetic. Antirheumatic.

Piperazine — $C_2H_4(NH_2)C_2H_4$ — Diethylene-diamine. Antirheumatic.

Piperonal. Heliotropine, which see.

Protargol.—A fine yellowish powder consisting of silver combined with a protein substance, and containing 8.3 per cent. of the metal. It is soluble in water, and the solution does not stain the skin or cause irritation, like most other silver salts. It possesses marked bactericidal properties; for injections, one-fourth to one-and-a-half-per-cent. solutions are used.

Pyrosal.—The salicyl-acetate of antipyrine. It is soluble in water and recommended as an antirheumatic and antineuralgic, in doses of from five to ten grains.

Resoreinol. Iodoform and resorein. Antiseptic dressing.

Salacetol — $C_6H_4(OH) \cdot COO \cdot CH_2 \cdot O \cdot CH_3$ — Acetyl-salicylic-ester. Antiseptic. Antirheumatic.

Salpyrine— $C_{11}H_9N_2O_2 \cdot C_2H_5O_2$ —Antipyrine salicylate. Antipyretic. Analgetic.

Salophene — $C_6H_4OH \cdot COO \cdot C_6H_4N \cdot H \cdot COCH_3$ — Acetyl-para-amido-sal. Antiseptic. Antipyretic.

Symphoral $N \cdot C_6H_4N_2O_2 \cdot SO_3Na$ —Caffeine sodium sulphate. Diuretic. There are also lithium and strontium salts.

Tannalbin. Tannin albuminate. Astringent.

Tannin, or Tannopine. —A condensation product of tannin and hexamethylenetetramine or urotropin $6(CH_2)_4N_4(C_6H_4H_2O_2)_2$. It is a light brown powder, free from taste or odor, insoluble in water or alcohol. Recommended as an intestinal-astringent, especially in tuberculosis, enteritis and typhus.

Tinnygen. —A compound of acetic acid and tannin. An intestinal astringent, and most efficacious in chronic, acute, and summer diarrhoeas. Dose for an adult, 10 grains every three hours.

Terpinol ($C_{10}H_{12}$) H_2O Terpin hydrate. Disinfective. Used in bronchial affections and in perfumery.

Tetronal — $(C_2H_5)_2 \cdot C(C_2H_5SO_2)_2$ — Di-ethyl-sulphon-diethyl-methane. Hypnotic and sedative.

Thalline Sulphate — $(C_{10}H_{15}NO)_2H_2SO_4$ — Tetrahydro-paraquinamisol sulphate. Haemostatic and antiseptic.

Thermodine — $C_6H_4(C_2H_5O)NCO \cdot C_6H_4COCH_3$ — Acetyl- π -ethoxy-phenyl-urethane. Antipyretic. Antiseptic.

Thiocol.—The potassium salt of guaiacol-sulphonic acid, $C_6H_3OH \cdot O \cdot CH_2 \cdot SO_3K$, and containing about sixty per cent. of guaiacol. It is a fine white powder, with a bitter-sweet taste, soluble in water, recommended as a substitute for guaiacol.

Triphenine — $C_6H_5OC_2H_5NHC_2H_5CO$ — Propionyl-phenetidine. Analgetic. Antipyretic.

Validol.—A combination of menthol and valerianic acid with an excess of menthol. It is a colorless fluid, possessing powerful stomachic and carminative properties. The dose is from ten to fifteen drops, either on sugar or in wine.

The Death of Sir James Mouat.—The death, at the age of eighty-three years, is announced in the *British Medical Journal* for January 14th of Surgeon-General Sir James Mouat, K. C. B., V. C., honorary surgeon to Queen Victoria, and a distinguished British military medical officer.

The Argumentum ad Feminam in "Christian Science."—The *British Medical Journal* for January 14th, commenting on Mrs. Eddy's recent pastoral, says:

"The high priestess of Christian Science, who surpasses Miss Marie Corelli in her gift of uttering ineptitudes with an air of inspiration, says loftily that 'a person's ignorance of Christian Science is a sufficient reason for his silence on the subject.' We cheerfully admit as a general principle that no one should speak of what he does not know, but we take leave to suggest to Mrs. Eddy that she would do well to hear this sound principle in mind when she feels a moving of the spirit to deliver her views on the treatment of disease. When she asks, 'What can atone for the vulgar denunciation of what a man knows absolutely nothing about?' we venture to ask in turn, 'What more are we expected to know about Christian Science than Mrs. Eddy has set forth in her book?' If the world does not now know all that there is to be known about Christian Science, the fault is Mrs. Eddy's own."

A System of Thieving in the School of Medicine of Columbia University is said to have been brought to light recently, and to have resulted thus far in the expulsion of one of the students. The articles stolen were instruments and chemicals.

Weyler's Fever.—We hear frequently of diseases which are named after their first investigator, such as Addison's disease, Bright's disease, etc. but we have not heard of *la Fiebre de Weyler* of Havana for many years. It is said that among the diseases which dominated the island of Cuba was "a grave form of paludism, characterized by chronic anemia, terminating, or at least leading to, and named Weyler's fever."

Extraordinary Case of Placenta Prævia.—M. B. Lot and M. Miravalles report a case in the *Boletín de la Academia de Medicina de Cuba*, January 31st, 1898. The patient, a woman, twenty-five years of age, had been married

was found to occupy the entire area of the dilated uterine os. The only course open was to penetrate through the placenta and perform podalic version, which was accordingly done. There was very little hemorrhage, and the placenta was expelled soon after the extraction of the child, which appeared to be dead. After fifty-five minutes of artificial respiration, mouth-to-mouth insufflation, hot cloths, etc., the child was brought to life. The examination of the placenta showed that it was complete, and that the child had been born through an opening made in it and situated about two inches and three quarters from its centre, to which the cord was attached. There were no accidents consequent on the accouchement.

A Yearbook of Neurology and Psychiatry is announced, according to *Science* for January 13th, by S. Karger, Berlin, edited by Dr. Flatau and Dr. Jacobsohn, under the direction of Professor Mendel. The work is prepared with the cooperation of a large number of leading German neurologists, and will perform a useful function, owing to the wide dispersion in many journals of publications on the subjects included. It will give not only a bibliography of some thirty-five hundred titles of the literature of 1897, but also short reviews of their contents.

A New Medical Journal in Kansas.—We learn that the *Kansas Medical Journal*, which has been published in Topeka for the last ten years, has been discontinued, and that its former editor, Dr. W. E. McVey, will have editorial control of the *Medical Monograph*, which is to be a monthly of a hundred and fifty pages.

The Annals of Ophthalmology.—We learn that Dr. H. V. Wündermann, of Milwaukee, who has been associate editor in charge of the department of German literature, has accepted the position of editor in chief, *vice* Dr. Casey A. Wood, of Chicago, resigned. Dr. Wood will remain in charge of the department of Italian literature. The staff will shortly be enlarged by the appointment of six collaborators. Abstracts of Dutch, Russian, Scandinavian, Polish, and Greek literature will hereafter be included.

The New York Academy of Medicine.—At a stated meeting, on Thursday evening, the 2d inst., Dr. Louis L. Seaman read a paper entitled the United States Army Bacterium and its Adaptability for Use in Tropical Climates, which was discussed by Major J. M. G. Woodbury, Colonel Charles R. Greenleaf, Dr. A. H. Smith, Dr. Charles H. Shepard, Major H. S. Kilbourn, Major W. D. Bell, Major N. S. Jarvis, Brigadier-General Eugene Griffin, and others.

At the next meeting of the Section in Pediatrics, on Thursday evening, the 5th inst., Dr. B. Scharlan will read a paper on Deformal's Operation for Chronic Emphysema, which is to be discussed by Dr. Robert F. Weir, Dr. A. G. Gersdor, and Dr. Willy Meyer. Patients were presented and specimens and new instruments were exhibited.

The Eastern Section of the American Laryngological, Rhinological, and Otolological Society. The annual meeting was held in Washington, on Saturday, January 25th, under the presidency of Dr. Charles W. Richardson, of Worcester. In addition to the president's address, six papers were presented: Reflex Cough, by Dr. George L. Richards, of Fall River, Massachusetts; Laryngeal Lesions in Operative Procedures

in Staphylothyph, by Dr. John C. Lester, of Brooklyn; The Proper Point of Incision in Peritonsillar Abscess, by Dr. Norval H. Pierce, of Chicago; Adenoid Vegetations of the Nasopharynx, by Dr. John O. McReynolds, of Dallas, Texas; Chorea of the Larynx, with a Report of a Case, by Dr. Joseph A. Stucky, of Lexington, Kentucky; An Unusual Case of Sinus Thrombosis and Epidural Abscess, complicated by Malaria, by Dr. M. D. Lederman; Two Operations for Mastoiditis with Unusual Features, by Dr. Thomas R. Pooley; The Simplest Non-operative Treatment of Otorrhoea, by Dr. Arthur G. Hobbs, of Atlanta; The Rebuilding of a Nose without the Insertion of an Artificial Bridge, by Dr. T. Passmore Berens; A Case of Self-inflicted Wounds to both Ears, both Eyes, and Larynx, by Dr. George Reuling, of Baltimore; The Necessity for Antiseptic and Aseptic Methods of Surgery of the Ear, Nose, and Throat, by Dr. Woolsey Hopkins; A Report of an Interesting Case of Dyspnoea in an Adult, by Dr. Walter B. Johnson, of Paterson, N. J.; a paper on The Operative Treatment of Chronic Purulent Otitis was discussed by Dr. Edward Dench, Dr. J. F. McKernon, Dr. S. Macuen Smith, of Philadelphia, Dr. Frederick L. Jack, of Boston, Dr. J. A. White, of Richmond, and others.

The American Orthopaedic Association.—The thirteenth annual meeting will be held in New York, on Wednesday, May 31st, and Thursday and Friday, June 1st and 2d, under the presidency of Dr. W. R. Townsend.

The Law of Compensation.—*Medical Snap Shots* states in its issue for February that "a physician, in speaking of the business side of the practice of medicine, says: 'A doctor will trust people longer and more foolishly than any man on earth. He will go on trusting people for years, until they leave him on account of hating him because they have owed him so much and so long. Then they will go to another physician and pay him, with little or no hesitancy.'"

The American Medical Association.—At the Columbus meeting, in June, in addition to their regular programmes, the Section in Ophthalmology and the Section in Laryngology and Otolology will devote the morning of the second day, June 7th, to a joint meeting, under the chairmanship of Dr. Casey A. Wood, of Chicago, and of Dr. Emil Mayer, of New York. The subject for discussion will be The Relation of Ocular Diseases to Affections of the Nose and Neighboring Cavities. Four papers are to be read on this subject, by invitation, as follows: Dr. Charles Siedman Bull, of New York, on Some Points in the Symptomatology, Pathology, and Treatment of the Sinuses Adjacent and Accessory to the Orbit; Dr. D. Bryson Delavan, of New York, on Nasal Stenoses in their Relation to Ocular Disturbances; Dr. Joseph A. White, of Richmond, Virginia, on Eye Troubles Attributable to Nasopharyngeal and Aural Disturbances; Dr. J. H. Bryan, of Washington, D. C., on Diseases of the Accessory Sinuses in their Relation to Diseases of the Eye. The general discussion will be on the main question.

The Southern Medical Journal is the title of a new octavo monthly of twenty-eight pages, edited by Dr. J. W. P. Smithwick, of La Grange, North Carolina, where it appears to be published, although it is printed in Kinston.

Original Communications.

FUNCTIONAL NEUROSES

AND THEIR RELATION TO
THE DISEASES PECULIAR TO WOMEN.*

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OF all patients who come under the observation of the gynecologist those having neuroses require the greatest care and judgment as to cause and effect, if the treatment is to be successful. I will state that in my theme I do not include the conditions ordinarily considered as true neuroses—as, for example, vaginismus dependent upon hypersensitiveness of hymenal remnants, or coealgodynia dependent upon an injury sustained during childbirth—but shall consider only those which may be called purely reflex. Experience has taught us that the physiological functions of the female genitals can influence the nervous system, and that, consequently, pathological conditions of them are frequently productive of neuropathic states. It may be possible, too, for diseases of the nervous system to produce symptoms which seem to arise from the pelvic organs, and which simulate disease of the latter, but I can not concede the possibility that such neurological state can produce an actual pathological condition of the genitals, as has been asserted by some authors. If we bear in mind the bountiful nerve supply of the genital organs from the great sympathetic through the hypogastric plexus, and from the cord through the internal pubic, sufficient reason can be found for the causation of reflex neuroses.

I look upon functional neuroses as a depraved condition of the nerve substance, which can not be demonstrated anatomically. The late Professor John T. Darby defined the condition as a starvation of the nerves, central and peripheral.

It is not my intention to dwell upon the complex structure of the nervous system, and I shall therefore limit myself to some practical points.

Some neuropathologists hold the view that all functional neuroses arise on a neuropathic basis, deny all other aetiological moments; older gynecologists attributed all to diseases of the sexual organs, and defined them as reflex neuroses. Both views are extreme; the correct position is the middle line.

A woman who is hereditarily predisposed to hysteria is more apt to develop it if she becomes subject to an affection of the genital organs than one in whom the hereditary element is excluded, showing that the genital organs play an important role in the production of neuroses.

The observation that neuroses and pelvic disease occur more frequently in our time than in former generations is accounted for by various factors. Many neuroses are dependent upon early training, a subject to which too much attention can not be devoted, especially about the time of puberty. Gross negligence must be charged to many parents in not paying attention to the effect of severe mental strain upon weak and delicate girls at this time. They are crowded on and on, until menstrual disturbances are manifested and a chlorotic neurasthenic constitution is presented—an intellectual training achieved at the expense of physical development.

The manner of dress is worthy of more thought by the medical adviser than is usually given it; young women frequently impede the development of the chest and abdominal organs by tight waistbands and corsets; impediment of the circulation in the lower extremities is caused by tight garters; faulty position of the pelvis in walking, by misplaced and too high heels in footwear. Habitual constipation and overdistention of the bladder contribute to the production of pathological pelvic conditions by causing temporary changes in the pelvic circulation, which in time may lead to chronic inflammatory changes.

Let us for a moment view one of the most common neuroses of woman—namely, hysteria—which may be termed a cerebral neurosis. To develop such an affection of the brain a proper soil is necessary, as under perfectly normal conditions its development is impossible; the predisposing soil being placed in the brain through heredity, physical or mental exertion, psychical disturbances, overindulgence in alcoholic beverages, and the physiological functions and diseases of the generative organs. For instance, the off-spring of a neurotic mother sustains during confinement a laceration of the cervix, which is of such extent as to leave cicatricial tissue in the vaginal vault and the portio vaginalis; the tear remains non-coapted and an erosion makes its appearance; an endocervicitis and subsequently an endometritis follows, the uterus remains large, and she has a sensation of weight in the pelvis; menstruation is prolonged and profuse, perhaps irregular; backache and neuralgia are present as concomitant symptoms; gradually a train of nervous symptoms is developed, showing themselves in irritability of temper, headache, and loss of appetite, and eventually the typical picture of a hysterical person is produced. Here, then, we have a reflex functional neurosis, dependent primarily upon changes in sustained during childbirth. If the same woman is unable to develop this condition if the same is exposed to enter the straits for an extended time. Nature has not endowed woman with a hereditary constitution of opposite sex, and a child of opposite sex is not exposed to the same strain as a woman. Puerperal psychosis, neurasthenia, alcoholism, etc., are not hereditary conditions.

* Read before the Section in Obstetrics and Gynecology of the New York Academy of Medicine in October, 1898.

functional neuroses—as, for example, the sudden death of a near relative under the adverse circumstances last alluded to.

It is not only difficult but impossible for one to determine how much influence a coexisting pelvic abnormality has on the respective neurosis until such patient has been under treatment for some time. It is obvious, then, that a physician in dealing with neuroses should have an eye on the social position of the patient, considering her duties in life, her hygienic surroundings, etc.

Among particular forms of reflex neuroses, those in connection with menstruation are quite prominent—as, for example, acne rosacea, eczema, urticaria, etc. The following instance is unusual:

A girl, aged fourteen years, began to menstruate between the eleventh and twelfth year; the flow was profuse, and of eight days' duration. A few months after the appearance of the menstrual epoch the child developed an eczema which extended over the hips, buttocks, and posterior surface of the thighs, gradually diminishing to nearly complete disappearance for two weeks after cessation of the flow. Upon the recurrence of each menstrual flow, the skin affection was intensified and took a similar course as on previous occasions. The writer was finally consulted on account of the exceedingly profuse flow. The child was well developed, short in height, and very plump. She complained of great weakness and was very anæmic, the quantity of hæmoglobin being reduced to forty-five per cent. A recto-abdominal examination revealed no pathological condition to account for the profuse bleeding. Incidentally my attention had also been called to the eczema. The girl was placed upon the use of stypticin in doses of a quarter of a grain every three hours, beginning four days prior to the next period, and with the beginning of the flow the dose was increased to half a grain every two hours. The result was that the next period continued only five days, the loss of blood was greatly diminished, and the eczema not intensified at this period. The treatment was continued three months, the flow diminishing to three days' duration, and of moderate quantity; the anæmia disappeared, and the eczema vanished completely without any direct treatment.

Another remarkable instance of menstrual neurosis was that of a girl seen by me in 1885, and reported in the *American Journal of Obstetrics* for February, 1886, as a case of reflex vasomotor neurosis dependent on a displaced ovary. The case is, I believe, unique. I have been unable to find any resemblance to it in the multitude of material observed before and since then. The chief features were that with the first appearance of the flow at the age of thirteen years the girl noticed a purple discoloration of the right upper extremity, interwoven with white spots the size of a lentil, and a swelling on the right leg and foot without discoloration was manifest at the same time.

During each menstrual period the upper extremity felt cold, the change in sensation beginning one day prior to the flow and reaching its height on the fifth day. In addition to this cold feeling she had on the three occasions when the discoloration was noticed a feeling of formication in the entire upper extremity.

When seen by me there were decided differences in the menorrhagia between the right and left side, and the superficial venous and capillary of the affected side,

as well as the veins of the anterior surface of the thorax, were greatly distended.

The severe pain in the right inguinal region, principally during the menstrual period, for which the patient came for advice, was considered to be due to an enlarged prolapsed right ovary. The girl was entirely cured of the dysmenorrhœa, and with it the neurosis also disappeared, so far as I know from about four years' occasional observation of the patient, subsequent to the conclusion of treatment.

Various forms and degrees of skin lesions in direct connection with menstruation have been observed by many, but the two instances alluded to above are the most interesting cases of undoubted pure functional dermatological neuroses which have come under my observation.

Among another class of functional neuroses dependent upon the menstrual period the psychoses melancholia and hypochondriasis occurring during the menopause are most important. Anatomically speaking, these conditions can not be classed among diseases based upon pathological changes; the best reason for classing them under the nomenclature discussed being that, in the majority of instances, the neurosis disappears in a year or two after the climacteric age has been passed.

What else than a reflex neurosis dependent upon changes in the pelvic organs can we term the anæmic and neurotic state occasionally observed in instances of formerly perfectly robust and healthy girls, who have been so unfortunate as to become a prey to seduction with consequent illegitimate pregnancy? I remember having seen two such instances in girls who changed as if by magic when they became joined in lawful wedlock to their respective seducers before the termination of gestation.

The neuroses of pregnancy, the puerperal and lactation psychoses, and their relation to the conditions mentioned, are no longer a mooted point, and to discuss them on this occasion would take up more time than is permissible to-night.

It has been denied by some that the non-satisfying of the sexual desire is ever productive of neuroses. Such assertion must, however, not be looked upon seriously, but rather as coming from a would-be reformer of human morals. Cardialgia, temporary tachycardia, cephalalgia, and general malaise, often associated with anæmia, are frequently found connected with menstrual disturbances due to an endometritis, and in a few instances I have had every reason to attribute these symptoms to the desire alluded to. In the case of one person, who had been under my observation for two years, all the reflex symptoms which were present disappeared within six months after her marriage.

The neurotic conditions associated with true nymphomania are too well recognized by the majority of physicians to require more than passing mention; I have seen one instance completely cured by the removal of an hypertrophied clitoris; on the other hand, however, sev-

eral failures after the operation have also been recorded by me.

The patient cured had the following status:

Aged thirty-five years, married ten years; never pregnant; husband a traveling salesman; menstruation profuse but regular; dysmenorrhea on the first two days, but not so severe but that she could be about. She was very anemic, irritable, and altogether presented the picture of those deplorable conditions so well known to the specialist. Examination showed excessive tenderness, but no change in size or position of the ovaries, and there was also present a moderate endometritis, the pelvic organs being otherwise normal. Of the external genitals, the hypertrophy of the clitoris was very marked. Excision of this and general treatment as to diet and exercise, together with cold douches over the spine and solution of bromide of gold and arsenic, sufficed to cure the woman in a short time.

Abortions, owing to a disregard for proper hygiene and lack of medical care, may exert a detrimental physical effect, which secondarily affects the nervous system. The partial descensus of a large uterus, exerting traction on all the structures aiding to keep it in physiological position, produces disturbances in the circulatory and nerve supply; as the result of this stasis and a probably existing endometritis, menorrhagia occurs, which may be so severe as to cause anemia.

Pelvic inflammations exert a pressure upon the nerves, and likewise cause circulatory changes. These mechanical lesions and alterations extend their influence to neighboring ganglia, the reflex extending to the central nervous system. Some reflex neuroses can also be explained from an aetiological standpoint by the exposure of peripheral nerve terminations from existing erosions and ulcerations of the genitals. Gross anatomical lesions, such as tumors and large exudates, are not apt to cause as much reflex disturbance as the minor lesions mentioned. Displacements of the uterus may cause most intense reflex neuroses. I recollect a case of retroversion, reported by me in the *Deutsche med. Presse*, of New York, in which melancholia with a suicidal tendency was present, a cure being effected by correction of the malposition. The neuroses under the control of the vagus—namely, the heart and respiratory neuroses—have been recognized by several writers in connection with pelvic disease.

In the August number of the *American Journal of Obstetrics* for 1886 I called attention to cardiac neuroses in connection with ovarian and uterine disease. I only wish to add now that during the twelve years which have elapsed the views expressed in that article have not been materially modified; in fact, they have been strengthened by corroborative communication from other observers. When we remember the clinical fact that habitual vomiting, tachycardia, headache, cardialgia, etc., sometimes disappear by curing an inflamed cervix uteri, dilatation of an unusually narrow cervical canal, the correction of a uterine displacement, or the

cure of a diseased endometrium, we can not deny the direct connection between the neurosis and the lesion. At the same time, however, both existing independently, the one may influence the severity of the other.

In our continued investigation of reflex neuroses, let me call your attention to one of the rarer forms, that in which, previous to the occurrence of an attack of hysterical convulsions, vomiting, or crying, the patient feels a painful sensation in the pelvis, back, or abdomen, which seems to radiate upward. Occasionally we can produce an attack by pressure upon a prolapsed and enlarged ovary or some old perimetritic or parametritic residue.

The auditory and optic derangements of nervous and hysterical patients are well known, and it is not at all unusual to have such cases sent by the respective specialists to the gynecologist to find that the primary cause is some disorder of the sexual organs. Among the vasomotor disturbances we can also class hemiparesis and that form of goitre appearing during pregnancy.

The nervous disturbances consisting of mental depression, spinal irritation, and migraine, coexisting with chronic inflammation of the ovaries, are worthy of special attention. One cause for ovarian inflammation and the neuroses dependent upon it may be found in interrupted coition practised by many who do not wish children; it acts the same as masturbation, and is, in my opinion, fully as detrimental.

In the majority of neurasthenic gynecological patients the digestive tract suffers more or less, and the usual dyspeptic treatment will not be of benefit to such women until special measures are undertaken to eradicate the base of the complaint. A differential diagnostic sign between the gastric neurasthenia dependent upon pelvic derangement and the so-called nervous dyspepsia is given by Burkhart, of Germany; it is that in the latter there is pain radiating over the entire abdomen, even over the chest, extending up to the neck and head, when pressure is made over the epigastrium, which is not the case in pelvic gastric neurasthenia.

We have alluded to the difficulty of treatment of the conditions under consideration, and it will be impossible in a paper such as this to give more than a general outline. I must premise the remarks which I shall make on therapeutics with the statement that it is impossible for any one to do more than to come to a problematical conclusion that a reflexive functional neurosis is due to a coexisting pathological lesion of the genital tract. The correct solution of the question must be left to the result of the special treatment. All psychoses with serious symptoms should be under the direction of the neurologist. On the other hand, however, the greater number of functional neuroses can and should be treated by the intelligent family physician, who is familiar with those conditions to which, according to the remarks on this occasion, they are connected. It is a serious error to give a large number of the most general treatment to neurotic patients, and to neglect the local

They will invariably become worse if attention is not paid to general hygiene, diet, proper physical exercise, and such internal remedies as will have a tendency to build up the system. To overcome the anæmia so often associated in this class of cases, I have found the solution of bromide of gold and arsenic to be among the most serviceable drugs at our disposal; beginning with five-drop doses in a glass of water after meals, and increasing one drop daily until from fifteen to twenty drops are taken. The red blood-corpuscles and the percentage of hæmoglobin are rapidly increased with the use of this drug. Occasionally, however, we do find a patient with whom it disagrees, when we must resort to other remedies. The gold solution has also a decided effect on the inflammatory conditions of ovaries. This was pointed out by an author in a European journal ten or twelve years ago, and has been employed during that period by me. Since the introduction of Dr. Barclay's solution, which is a combination with arsenic, it has been used with better effect than the chloride of gold and sodium in pill form. Barclay gave the name arsenaurol to his solution for the sake of brevity. A symptom usually present in these patients is chronic constipation; this often gives rise to anæmia and chlorosis, due to auto-intoxication from ptomaines. I regard the cause of this constipation in the vast majority of cases as due to habit, and if one confines himself to the legion of laxatives and cathartics the condition is made worse.

Correction of diet and habit, together with proper exercise and massage, has usually given the desired effect. Unfortunately, however, abdominal massage is generally improperly applied; it has, therefore, been my rule to give the instruction as to its application personally. The massage must necessarily vary according to the case, and it is therefore obvious why physicians, who simply prescribe massage and leave the method of application to the discretion of the masseuse, do not have such effect follow the treatment as they expect.

The functional neuroses of the menopause, consisting of attacks of vertigo, hot flushes, tachycardia, a feeling of restlessness, and insomnia, have been beneficially influenced by the bromides in large doses, given an hour or two before the time when the symptoms would be most intense, if such intermissions existed, as is occasionally the case. If no regularity can be ascertained, 2.0 of bromide of potassium combined with 0.6 of sulphonal, given in a glass of hot sweetened water at bedtime, is usually sufficient to relieve the symptoms. Some patients, however, do not bear sulphonal, it producing in them a heavy feeling and drowsiness on the following day, without refreshing slumber the foregoing night; in these cases the bromide of potassium, given in doses of 1.3 two to three times daily, has been found serviceable. In neuroses presenting similar symptoms but following ablation of the annexa or removal of the uterus, with or without the ovaries, ovarine has given more relief than the bromide, but the latter are of de-

cided benefit as an adjunct if the attacks of vertigo or hot flushes manifest themselves, particularly at a certain time of the day, as has been frequently observed. In this instance, one single large dose is administered about two or three hours before such time. Blisters behind the ears, alternated with one in the nape of the neck, and the use of the Paquelin cautery at white heat in the latter situation, have been found beneficial in some cases.

The symptoms in neither case, whether due to the natural menopause or to artificial menopause, have been completely allayed, but the condition of the patient, which before treatment is in some instances almost unbearable, usually becomes quite comfortable. In the treatment of all forms of neuroses it is necessary to pay strict attention to diet, giving preference to such foods as contain phosphorus, iron, and fat, unless there is some particular contraindication. In many instances glyco-phosphate of lime, iron in the form of manganese peptonate, or the peptomanganate, blood and iron preparations, such as hæmaboloids, ferratin, bovine, etc., are of advantage.

An important adjunct for the betterment of functional neuroses will be found in hydrotherapy, judiciously employed.

I have found that patients afflicted with functional neuroses are greatly benefited by occupation suitable to their physical development, especially physical exercise.

At no time, however, must we lose sight of the gynecological disorder, which is presumably productive of the respective neurosis.

Let us now consider surgical interference in our cases. This of all forms of treatment is one of the most important. It should never be employed except under the most positive indications, especially in patients with a marked hereditary taint. Where is the physician who has not seen the most lamentable results from the over-assiduousness of the operator who is possessed with operating fever?

I refer particularly to castration for neuroses. But a very small percentage of women who have been operated upon were benefited, and those were in the hands of men who drew the line of indication with the utmost conscientiousness. There are neuroses, especially hysterio-epilepsy, which are not only greatly improved, but absolutely cured by operation. In the cases which have occurred in my own practice there was a decided change from the normal structure of the ovary, and such has been the almost invariable experience of gentlemen universally recognized as painstaking observers. To operate for the cure of hysterio-epilepsy or any other form of functional neurosis, unless we are able to recognize some definite pathological lesion as probably having a connection with the neurosis, is an unjustifiable procedure. On the other hand, it has been my good fortune to relieve three instances of migraine with ovarian neuralgia by resecting that part of the ovary which

had undergone decided cystic degeneration, the diseased structure producing pressure upon the ovarian stroma.

It might be argued that the simple impression of the operation upon the mind cured these patients; against this, however, stands the fact that the three patients referred to have not had a return of the pain, and that there was actually a pathological condition present which would account for the localized pain. The migraine was not associated in my mind at the time with the ovarian change, but its disappearance after operation is sufficient reason to view it as a reflex symptom in these instances.

I may also add that in some patients who are operated upon without immediate beneficial effect on the existing psychosis, the improvement may take place gradually, so that in from six months to three years a complete cure is established. I must reiterate, however, that the operation of oophorectomy for the relief of an intense disturbance of the nervous system is a very serious matter, and should never be undertaken without the utmost scrutiny of all associated conditions; I make bold to say that more harm than good has resulted from it.

A similar statement I would make on other operations, especially euretting, trachelorrhaphy, and perineorrhaphy, which operations have very often been unnecessarily performed.

In closing, I wish to say that I am aware that the theme chosen has been dealt with by me incompletely, my desire being to bring about an interchange of ideas. The result of practical observation shows that the specialist must be qualified in general medicine and not alone in his specialty, and be a physician in the true sense of the word, if his object to relieve the afflicted is to be attained. There are other matters besides pelvic organs and nerves to be looked after in the management of these complex conditions.

THE TREATMENT OF TYPHOID FEVER.*

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Dr. Haughts, the physician to King William and Queen Mary, "was in great Repute with many Families of the greatest Quality and Wealth in the Kingdom." Here is an account in part of his treatment in 1689 of a young lord five years old: "After some Bulimance, because his natural Strength seemed already much weakened by the Disease, I was at last obliged to take at least six Ounces of Blood from his Arm; and the next Day to give a Purge. After the Operation was over a corroborating Julep, chiefly designed to drive away the remains of the Cough, was of sufficient Service to him in his weak Condition that he daily

approached nearer to the most perfect Health, and recovered a good Constitution, which he still enjoys."

In 1890 more than twenty-seven thousand persons died in the United States from enteric fever. That is, in round numbers, the size of our army. For a decade to 1896, this army averaged 138.5 cases of typhoid fever annually with a mortality of nineteen per cent. (Osler).

The borough of Manhattan gives up four hundred lives from this cause yearly.

During the first year of our civil war eight per cent. of the troops had typhoid, and from thirty-five to fifty-five per cent. of them died. The fifty-five per cent. mortality was among the blacks.

In the Spanish-American war just closed about ten per cent. of the troops from New York State had the fever. More complete figures are not at hand.

These facts are sufficient apology for again presenting so old a subject.

As has been well said, "the days of stellar pathology" are gone by. We no longer ascribe the disease to telluric influences, but to a specific germ which has been isolated and cultivated. In addition to the familiar symptoms of typhoid, we can verify our diagnosis in ninety-five per cent. of the cases by Widal's serum test.

Knowing the cause and symptoms, we should be able not only to relieve and cure our patients, but prevent others from being sick.

When we first suspect typhoid we should at once begin the hygienic management. Put the patient to bed in a light, well-ventilated room, etc.

Next begins the management of the patient, for whose comfort we can do much, but with whose disease we can do little. By general consent cases can not be aborted, though we may by skillful care shorten the disease and hasten convalescence. In 1850 West said, "The great object is to carry the patient through an affection which we can not cut short, with as small an amount of suffering and danger as possible." We are in the same position to-day.

The dietetic management is first in importance, and medicinal treatment secondary.

During the first week the digestive fluids are weakened and the appetite is lessened. Light diet should be given, and that in part either which is easily digested and assimilated. Solid or fluid is not the necessary point, but digestibility. Milk is fluid, but is coagulated into a large, firm coagulum in the stomach. If there is little or no further digestion, a solid foreign body exists to irritate, ferment, and cause weight, pain, and tympanites. Sir William Jenner pointed this out long ago. Nevertheless, milk is the best started diet on the beginning. A pint of milk has considerable nutritive value as a good second nutrition food. A young child for maintenance thirty ounces of the milk, and for convalescence three times as much albumin and fat, and for adults three to four carbolons. Nothing so complete a nutritive food to replace meats as milk. The fat and protein of milk are not

* Read before the Society of the Alumni of the City of Health Hospital, November 9, 1898.

use particularly rich milk, as an excess of fat will cause butyric-acid fermentation.

If there is a sense of weight and a feeling that the milk is not readily leaving the stomach, dilute with one third part of lime-water, Vichy, or Seltzer. As the disease progresses and the digestive powers diminish, peptonize the milk partially or completely. Vary the dietary with matzoon or kunyss.

Fresh eggs may be beaten thoroughly and given in milk during the early and latter parts of the disease.

Peptonized milk jelly is relished during the same time. It is simply gelatin added to hot peptonized milk with added sugar and flavoring. Dr. Henry has called our attention to the fact that gelatin saves the consumption of albumin in the system and should be restored to a prominent place in the dietary of the sick. Iced tea, iced cocoa or coffee, and lemonade are all relished. Coffee helps a weak heart.

Wine whey and beef tea are refreshing beverages. The latter, to become nutritive, should have an egg stirred in to supply the deficient albumin.

All the meat juices and broths are wholesome to some degree, but incline to cause diarrhœa, hence must be withheld during the diarrhœa period.

Liquid peptonoids, alone or with Vichy, will prove food and drink for many days. Fruits can be given with care. As the patient becomes apathetic with increasing fever the sense of hunger and thirst is dulled. He must be urged to take food and also to drink. The high temperature uses up the water of which our tissues are more than two thirds composed; hence supply the loss.

As one writer expresses the matter, it is a question whether tissue degeneration is as much due to pyrexia as to drought. Certainly patients feel better and do better when they are liberally supplied with water and urged to take it. Children in particular will drink large quantities. If given in small glasses so that they drain the cup, the satisfaction is doubled. Give more water, sterilized of course, and give it constantly.

Ellis says, "To preserve the powers of the stomach is the keynote of success in the treatment of typhoid fever." Remember also that a single error of diet during convalescence may be fatal.

Medicinal Treatment.—As already stated, the disease will run a course more or less classical in spite of treatment. Nevertheless, many troublesome symptoms can be mollified and unfavorable complications avoided by simple drugs. Of prime importance is intestinal disinfection. To be sure, the damage to the system is caused by toxins produced in the intestinal glands after the bacilli are absorbed. That is no reason why we should not give drugs to destroy any in the intestines still unabsorbed. Calomel is given for this purpose and also to drive forth all invaders. One or two doses given early will be on the severity of many cases. If constipation exist through the first week or longer, Hunyadi water or

citrate of magnesium will benefit. The eliminating action of calomel is its most important effect.

Turpentine and terebene have had extensive trials and proved good, but have now given place to more certain coal-tar products. Naphthalin is said to be the most inimical to typhoid germs. I find salol more agreeable and generally efficient. It breaks up in the intestine into carbolic acid and salicylic acid. These are said to be soluble and so injurious. I have seen no ill effects, though salol comes as near being my routine prescription as any one drug. Thyndol, given in capsules, acts in the same way, destroying the ptomaines of the intestinal alkaloids.

Alcohol is no longer given *ad libitum* and in all cases. Nearly all writers say, Choose the cases, or give alcohol only in the later stages, when the heart is weak, as shown by failing first sound and marked dirotism of the pulse. Subsultus and extreme nervousness are relieved by wine or milk punch. The restlessness of children with typhoid is increased by spirits. They do better under increased nourishment—peptonoids, for example, and a Dover's powder.

The flagging heart and soft, compressible pulse become a source of anxiety during the third week. Camphor, ammonia, strychnine, digitalis, and caffeine are the best heart tonics.

Diarrhœa, if exhausting, is checked by bismuth subgallate, Dover's powder, opium, enemata of starch and opium, or pills of silver nitrate. Dr. Pepper reported one hundred cases treated by the silver method with no death, yet the treatment has not become popular.

Tympanites is often very troublesome. A high injection of normal salt solution will sometimes bring away curds of milk and so relieve. It was Sir William Jenner, I think, who recommended washing the bowel with thin gruel for the relief of the tension and consequent restlessness. Meat preparations instead of milk for a day or two tend to relieve the pressure of gas.

If essence of pepsin and hydrochloric acid have been given freely from the beginning, flatulence will be very uncommon. During my last hospital service there were a dozen patients with the disease, only one of whom suffered from tympanites. Peptonized milk and water exclusively for drink and turpentine stupes outside relieved them in a short time.

Antipyretics are just now boycotted, and justly so. Acetanilide and antipyrine are the most powerful and will soonest reduce a high temperature; but they diminish the elimination of urea and so interfere with metabolism. Their continued use is dangerous and may prolong convalescence by leaving the blood-vessels very weak. At times one or two doses are of the greatest benefit, as in the case of a girl, eighteen years old, whose temperature remained 105°, and who had a dry, beefy tongue with delirium, etc., all of which would not succumb to cold sponging. Two doses of acetanilide reduced the temperature, lessened the nervous disturbance, and brought about a moist state of the tongue.

A similar case I reported to you five years ago, that of a lad who was wildly delirious and made more so by the usual hypnotics. After a full dose of pilocarpine he broke into perspiration, the temperature fell, and the delirium ceased.

Both of these cases emphasize the remark of Henoch that "the uncompromising adherence to a certain method will not always lead to the benefit of the patient."

Quinine was once the favorite antipyretic, but it is less used than it was fifteen years ago. In some instances I find small doses, two or three grains given in capsules with the same amount of phenacetine, will control fever and delirium.

In 1797 Currie advocated the free use of cold water. Hydrotherapy is the most important remedy in the minds of most practitioners at this time. Brand, in 1861, said we had nothing to fear from fever. In 1874 228 cases were treated in Lyons by cold tub baths with a mortality of 10.9 per cent. At the same time and place 290 were treated without baths with a mortality of ten per cent., but they were said to be milder cases. In 1887 Brand cited 1,223 cases with 12 deaths, a fatality of one per cent. Hospital mortality under expectant treatment ranged from fifteen to twenty-five per cent. For instance, Delafield reported 1,305 cases in New York Hospital in 1878-'83 with a mortality of 246, or six per cent. Tuttle reported 76 cases in the same hospital during 1893 under tubbing, with a mortality of five per cent.

Notwithstanding favorable figures running into the thousands, cold bathing or tubbing is not so universal in this country as in Germany. Cold sponging and douching seem sufficient to many men here. The Brand treatment requires the patient to be kept in a cold bath for fifteen minutes every hour if the temperature is above 102.5°. As this causes the extremities to become blue and the teeth to chatter, friction must be kept up until the patient is returned to bed. Stimulants are needed also.

Baruch calls attention to the fact that the circulation is good after the bath, but poor after antipyretics. Antipyretics inhibit cell activity while bathing increases it.

I like sponging with cold water better than tubbing, and with such treatment, conjoined with intestinal antiseptics, have had a mortality of three and a half per cent. in 70 cases. Hemorrhage and perforation are the only complications that contraindicate cold baths. External cold is good treatment for the former. For the latter there was formerly no hope, but Osler says that no case of perforation is too hopeless for a good surgeon. Koch has collected 84 cases operated on with a mortality of nineteen per cent. One in five is worth saving, particularly if one of us happened to be the one.

We come now to what I believe the most important part of the subject—viz., prophylaxis. It is an old

maxim that prevention is better than cure. Use every precaution possible to confine the disease to the one case you are treating. Let the doctor and nurse use freely solutions of bichloride of mercury (1 to 1,000) to which permanganate of potassium is added. Wash hands, thermometers, etc., in it. Boil all bed linen or patient's clothing for several hours. Do not use mercury solutions to disinfect typhoid stools, as an albuminous coating is formed on the outside of solid masses, and multitudes of germs fail to be destroyed. Use lime freely, as this penetrates and annihilates bacilli of all kinds.

A stock solution of chlorinated lime should be ordered, eight ounces to a gallon of water. Of this solution an ounce added to a gallon of water is suitable for disinfecting stools and washing soiled linen.

The stock solution of bichloride is bichloride of mercury, four ounces; potassium permanganate, one drachm; soft water, one gallon. Dilute as in the foregoing.

Where sewerage systems are as good as ours, typhoid stools may be emptied into water closets. In the country great care should be taken to use lime very freely and then bury the excreta, always remembering to avoid the possibility of percolation into a well or stream.

Military prophylaxis has been thoroughly discussed during the past summer. Many of our soldiers had typhoid because they persisted in drinking from a spring which was later found to be only a few feet from an old privy vault. This was carelessness on the part of those who drank and became sick.

In 1885 Plymouth, Pennsylvania, had a frightful epidemic of typhoid because during the winter a careless or ignorant family had for weeks thrown typhoid stools on the bank of a stream back of their house. Plymouth's water supply was contaminated.

In Montclair adults and children died of typhoid because a careless milk dealer, and physician possibly, allowed the milk supply to be infected.

Some one somewhere is remiss, or is without proper knowledge, or else does not use what he does possess. It is our business as physicians not only to cure our patient if we can, but repeatedly instruct nurses and members of families in the nature of typhoid fever, and insist on every possible measure to prevent its extension.

28 WEST THIRTY-SIXTH STREET

COPPER ARSENITE AND NUCLEIN SOLUTION FOR TYPHOID FEVER

By JOHN AULDE, M.D.

THE following reports are offered in connection with the article on this subject which appeared in the *New York Medical Journal of January 10, 1898*. They have been furnished to me by Dr. E. W. Johnson, a long and able surgeon, United States Army, and who has been in the second division hospital of the First Army

Corps, located at Camp Poland, Knoxville, Tennessee, and I have his permission to make extracts from his personal letters sent at the time the reports were forwarded.

Under date of October 17, 1898, Dr. Jackson sent me the first two temperature charts, together with the accompanying comments, and wrote as follows:

"The inclosed reports do not, I believe, require any extended explanation. I have a number of other cases (completed cases) which have not yet been transcribed from the records, for the reason that I have not had the time. Since writing you last I have met with several refractory cases, but I have also a few more favorable cases to add to the number. I believe I can honestly testify to the fact that enteric fever has been favorably modified in nearly if not quite all the cases in which it has been used. The refractory cases were all serious cases from the beginning, and had pulmonary or other complications.

"There is absolutely no doubt as to the specific character of nearly all the cases of fever here. Some of them are, of course, of a mild type, but there are plenty of severe ones. You must understand that I have not felt at liberty to employ this treatment in every case, for the reason that it seemed desirable to make this study with as little ostentation as possible, even though I had the permission of my superior officer, and also the authority from the surgeon-general's office (through the documents sent by you), to test the treatment. A dozen cases carefully observed will be better, it seems to me, than a hundred without proper attention to details.

"To eliminate the possibility of these cases being considered malarial, specimens of blood were examined before quinine was administered. After this, quinine in solution was given to the point of cinchonism, without effect upon the temperature curve or the character of the fever. Dr. George Dock, of Ann Arbor, Michigan, spent several days here, examined many blood specimens for the malarial plasmodium, and announced as his opinion that all continued fever cases in this hospital were cases of true typhoid fever, and this view is held by nearly every member of the medical staff of the hospital.

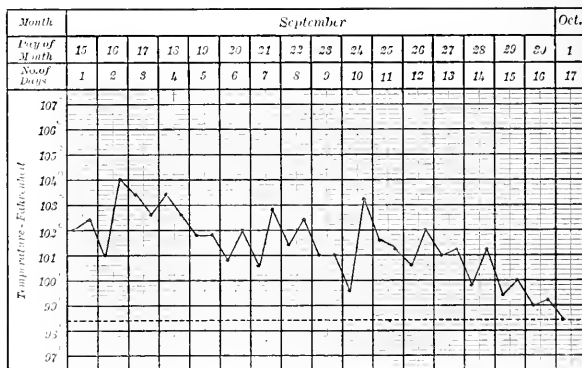
"I believe the accompanying charts show that the copper arsenite and nuclein solution *did* have a pronounced effect upon the duration of the fever, and I am also prepared to assert that the character of the fever was changed by the administration of these remedies. The chart do not show the improvement in strength, increased comfort, and rapid cleansing of the tongue which occurred in every case. The treatment was instituted rather late in both these cases, owing to the fact that

they were well advanced when supplies and instructions were received. Side by side with these cases there were treated others with the same fever, according to the best and most recent plans in vogue, and it was observed by the nurses as well as myself that the nuclein treated cases made the best progress and did better in all respects.

"I have now under observation a number of men in whom the treatment was instituted earlier than in the cases here given, and the indications are that they will be of rather brief duration and mild, although they were originally severe in type. I am now administering the solution hypodermically, and find that the effects are increased by a slightly heavier dosage than recommended.

"CASE I.—C. S., admitted to the hospital September 15, 1898.

"*History.*—Camped in Chickamunga Park all summer, and came to Camp Poland with troops about the last week in August. Had malaise for some days preceding fever, and diarrhoea; pain in the back, limbs, and head; tongue heavily furred. No chills, or history of chills or sweats.



CASE I.

Clinical Memoranda.—On entrance the patient was given quinine in solution to cinchonism, and calomel, one grain, for three doses.

September 15th patient had guaiacol carbonate, four grains, and salol, five grains, alternately every four hours. A liquid diet was insisted upon.

September 25th patient had nuclein, one minim every hour, copper arsenite, grain one one-hundredth, every three hours, the normal being reached after four days' treatment.

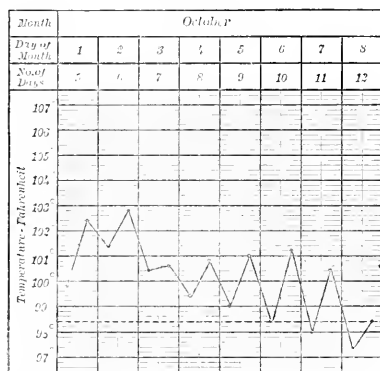
Blood examination for plasmodium malarie negative upon repeated observations. Later, the patient developed iliac tenderness with tympany and apathy, but no vomiting. Rose-spots appeared twice during the course of the fever.

"*Treatment.*—Quinine in solution to cinchonism, with calomel, one grain, for three doses. This was followed by capsules of guaiacol carbonate, four grains, and salol, five grains, alternately, at intervals of four hours. Sponging for temperature above 102.5° F. An occasional dose of cocaine sulphate was given when indicated by sleeplessness or pain.

"Upon September 25th the above treatment was discontinued, and the patient was given nuclein solution, one minim every hour, and copper arsenite, one one-

the temperature touched normal, when tonic treatment consisting of strychnine and 'pil. ferri comp.' (iron, arsenic, and strychnine) was substituted. (See chart.)

"Liquid diet was enjoined."



CASE III.

Clinical Memoranda.—On admission patient had quinine, fifteen grains.

October 2d patient had nuclein solution, ten minims, and copper arsenite, one one-hundredth grain, every three hours. This treatment was continued.

On October 4th, 5th, and 6th patient had profuse perspiration.

This man had been sick in quarters for a period of four days, so that treatment really began on the fifth day of the illness.

The chart shows that the specific infection characteristic of typhoid was arrested after treatment had been continued for a period of two days and a half—when

condition of the muscular system and failure in elimination, but without specific infection.

"CASE IV.—E. H., admitted to the hospital October 1st, and was, to all appearances, a clear case of typhoid fever.

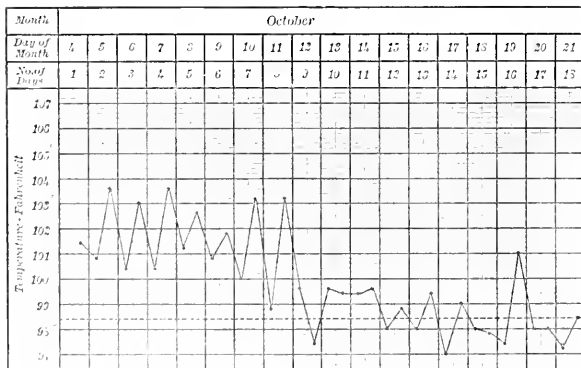
"History.—In Camp at Chickamauga Park during the summer; came to Camp Poland, Knoxville, Tennessee, with other troops about the last week in August. Sick in quarters several days before admission to the hospital. The probable source of infection: infected food or drink in camp or at Knoxville. Patient complained of severe pain in back and head, with nose bleeding. An examination of the blood did not reveal the plasmodium malarie. Patient complained of abdominal tenderness. There were rose-spots present, a typical typhoid-fever tongue and moderate tympany. Diarrhoea was rather severe.

"Treatment.—The accompanying chart shows the course of medication pursued, with its effect upon the temperature curve. A marked abatement in severity of symptoms was consonant with improvement in temperature. The improvement was very marked in this case.

"On October 19th a sudden rise in temperature is noted, which probably bore no relation to the original fever, as it occurred during a sudden cold wave, which made the unheated ward very chilly."

Referring to the accompanying chart, it will be noticed that the temperature approached the normal after treatment had been continued for a period of three days; then followed notable variations for the next two days, after which it was somewhat erratic, but no one familiar with the peculiarities of the disease would insist that it

was a genuine case of typhoid subsequent to the three days of treatment with the two remedies mentioned. Although I have no personal knowledge of the cases under observation further than is shown by these records, I am of opinion that this and several of the others might have been advanced more expeditiously by the conjoint employment of one or more of the following remedies—namely, mercury binioidide, belladonna, or hyoscyamus, according to the special indications present, although I do not deem it expedient to enter upon a discussion of the question at this time.



CASE IV.

Clinical Memoranda.—On admission patient had aloin tablet at six o'clock p. m.

October 2th patient had quinine in solution, five grains to the drachm, every three hours, cinchonism being produced on the afternoon of the 5th.

October 8th patient had nuclein solution, ten minims, and copper arsenite, one one-hundredth grain, every three hours.

October 14th tonics were administered, strychnine arsenite, one thirty-second of a grain, four times a day.

October 19th patient had phenacetin, five grains, two doses.

the temperature fell to 99° F. We have here an apt illustration of the manner in which the nervous system may be affected—shown by the marked variations of the mercury from morning to night, together with the subsequent subnormal temperature, indicating a relaxed

periodicity, the blood was examined for the malarial organism with negative results. During the month of August the patient was slightly jaundiced.

"Treatment.—Quinine was administered to the point of cinchonism, after which the copper arsenite, one one-hundredth grain tablets, with nuclein solution,

"CASE V.—W. M., admitted to the hospital October 6th, with a temperature of 103.4° F., and with the evidences of typhoid infection, such as severe headache, pain in the back, diarrhoea, and general prostration.

"History.—On October 10th a distinct crop of rose-spots appeared. Although there were no chills or other evidences of

ten minims, was given every three hours, as indicated by the accompanying chart. The improvement in the patient's general condition was apparent soon after this treatment was instituted, and the normal temperature was reached on the eleventh day after admission. This

days, with headache, backache, abdominal tenderness, moderate diarrhoea, and coated tongue. Bacteriological examination gave Widal reaction (Philadelphia Bureau of Health, October 31, 1898). Microscopical examination of the blood for *Plasmodium malariae*, negative.

Treatment.—Quinine to cinchonism, given in capsules and solution. Calomel, ten grains in three doses—i. e., one dose of five grains and two doses of two grains and a half each. This treatment covered a period of several days. Guaiacol, five grains in capsules, was then given at intervals of three hours until nuclein medication was instituted.

I should add in this connection that in each case, except No. 3, the clinical diagnosis was confirmed by the Widal reaction test, this work having been done, and the reports sent direct from the bacteriological department of the board of health of the city of Philadelphia, through the courtesy of Dr. A. H. Stewart.

In concluding this report I desire to direct special attention to the supposed function of nuclein in combating disease. It is the name given by experimental physiologists to the product of the polynuclear white blood corpuscles, and chief of the so-called "defensive proteoids." Both typhoid fever and malaria are

man was probably ill for several days prior to admission to the hospital."

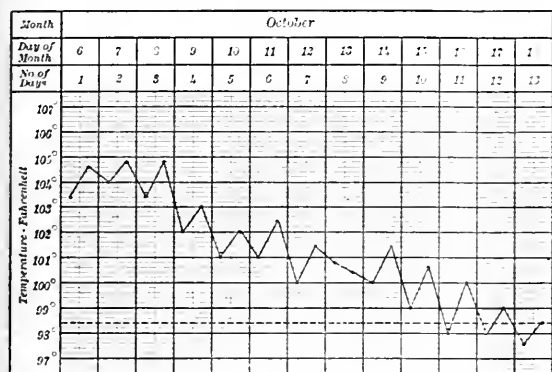
An examination of the chart shows that treatment by copper arsenite and nuclein was continued for six full days before the temperature fell to 99°

F., but in view of the history of jaundice, it is not unreasonable to infer that this patient suffered from masked malaria, notwithstanding the failure to discover the plasmodium. Instead of being interpreted as a failure in the treatment, therefore, it should be regarded as another evidence in its favor; since it has been repeatedly demonstrated by clinicians throughout the country that nuclein is our most effective remedy against this particular type of malarial infection. In our Northern climates its success is phenomenal, cases of long standing being arrested within a week after the failure of quinine given in doses as high as sixty grains daily. Professor Edwin F. Wilson, of Columbus, Ohio (*Columbus Medical Journal*, January 22, 1895), reported a case of this nature, in which quinine, arsenic, and Warburg's tincture signally failed, although nuclein alone restored the patient to health within a week.

CASE VI.—E. E., admitted to the hospital October 19, 1898.

History.—Previous history, negative. On admission, complained of chilly sensations for three or four

diseases in which there is an absence of leucocytosis, but by the introduction of an artificially prepared nuclein, we supply these corpuscles with the pabulum which enables them to functionate—that is, to act as scavengers.

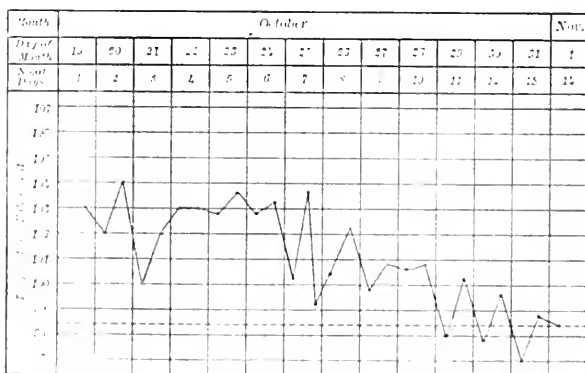


CASE V.

Clinical Memoranda.—On admission patient had quinine in solution, five grains to the drachm, to cinchonism.

October 8th (p. m.) patient had nuclein solution, ten minims, and copper arsenite, one one-hundredth grain, every three hours.

October 16th tonic treatment was instituted.



CASE VI.

Clinical Memoranda.—On admission patient had quinine in solution, five grains, in two capsules, of two hours, and on the afternoon of the following day warm sponge-bath.

October 1st, quinine and calomel (p. m.). In the afternoon of the same day, five grains, and quinine, five grains, at intervals of two hours, cinchonism to be produced on the third.

October 8th patient had calomel, ten grains, at ten, twelve, two, and five o'clock.

October 2nd rose spots appeared, the patient had a bath, and was given, each, solution, ten minims, and copper arsenite, one one-hundredth grain, every two hours, and on October 16th tonic treatment was adopted.

to destroy or render inert microorganisms and their products, and it is now believed that these corpuscles bear a close relationship to the phagocytes, first brought to our

attention by Professor Metschnikoff. There is a consensus of opinion among unprejudiced observers that phagocytosis and leucocytosis are complementary functions. The physiological basis of medication by copper arsenite is too well known, and the brilliant clinical successes attending its employment too long established to require further elaboration as a factor in the treatment of typhoid fever.

GENERAL DIRECTIONS FOR THE TREATMENT OF TYPHOID FEVER.—The following general directions have been prepared for the guidance of several medical friends and acquaintances who have thought favorably of the plan of treatment recommended and have expressed their determination to test it when opportunity offers:

Medicinal.—Copper arsenite, one one-hundredth of a grain; nuclein solution, one minim.

The above tablet triturates to be given together, one of each, at intervals of three hours, beginning at six o'clock in the morning and continuing until nine o'clock at night. In urgent cases they should be administered at intervals of two hours for the day; and where the stomach is rebellious, or when the anticipated medicinal effect is not observed, the nuclein is to be given hypodermically in doses of five minims (ten drops) once a day, preferably in the morning, the injection being made at some indifferent point under antiseptic precautions.*

Physiology.—The belief is warranted that the copper arsenite exerts an important influence upon the cellular structures and nerve supply of the small intestine, while the nuclein stimulates the leucocytic function.

Mercury Binioidide.—One one-hundredth of a grain.

This mercurial is employed for defective hepatic action, foul condition of the stomach and coated tongue. One tablet is to be given every hour, or every two hours, for the day, the copper salt being discontinued for the time. In the condition described, with constipation, it will be expedient to administer small doses of a saturated solution of magnesia sulphate.

Strychnine Arsenite.—One thirty-second of a grain.

This remedy is employed to combat muscular relaxation, tone up the weak heart, and overcome the general debility, one tablet to be administered every two to four hours. Whisky or champagne may be employed as stimulants when demanded, although this is rarely necessary when the strychnine salt is administered.

The foregoing directions make no mention of the use of codeine or the bromides as hypnotics, of salol or other intestinal anti-septics, nor of antipyretics, since

there is no apparent demand for such after the patient has been under this treatment for a period of twenty-four hours. Small doses of gelsemium (half a minim of the fluid extract every half hour until five doses have been taken) is to be given for the relief of headache or fugitive pains.

Dietetic.—*Nitrogenous food* should be employed as far as possible, such as beef tea made from a good extract, beef juice, and bouillon.

Hot milk, to which has been added limewater, should be administered, and if not well borne by the stomach, it will be necessary to add a small portion of liquid pancreatin or peplogenic powder, peptonization being completed in the stomach. Junket may be given for a change.

The rule should be, liquid food as far as practicable, given hot, and at the same time as medicines are administered—at intervals of two to three hours. Cold water is allowed in moderation.

1513 ARCH STREET.

THE EARLY DIAGNOSIS, PROGNOSIS, AND TREATMENT OF SEPTIC INFECTION OF THE HAND.*

By J. L. ANDREWS, M.D.

"THE Early Diagnosis and Treatment of *Some Septic Infections of the Hand*" would be a more accurate title for this paper, as it is intended to mention only those forms clinically known as cellulitis, felon, etc.; in other words, those in which there is a tendency toward the formation of suppurating foci in some of the structures of the hand, together with more or less constitutional disturbance. That the subject is important is testified to by the considerable number of missing fingers, hands, and forearms, and the many distressing deformities which we see in private and dispensary practice as a result of septic infection. For discussion it is convenient to classify these cases according to the structures primarily affected: First, those involving the subcutaneous tissue and finger pulp; second, the periosteum; third, the joints; fourth, the tendon sheaths.

In the early stages the diagnosis necessarily rests upon the past and present subjective symptoms and the objective signs. The point of infection may be a small punctured, incised, or lacerated wound, or a blister, scratch, or sliver. In other cases the injury is a blunt one, with no appreciable rupture of the skin. Often the history of the above condition is absent and we have no sign of the point of entry of the poison. Pain is regularly one of the earliest symptoms, usually coming on before any appreciable swelling. When only the subcutaneous tissue is involved the pain is not exerting, or even severe, unless the process is going on under

* Dr. Jackson found better results from larger doses, and I think it is quite possible that his judgment is correct, but a microscopical study of the blood still be required to determine just what effect is produced upon the functional activity of the white blood corpuscles before this question can be definitely settled. Later observations confirm Dr. Jackson's practice, the tablet being dissolved and the nuclein solution used instead, at intervals of four to six hours, in ten minim doses.

* Read before the Society of the Alumni of the City (Charity) Hospital, October 12, 1898.

a thick palmar skin. It is enough to keep patients awake at night, however, but often does not keep them from their work. Tenderness is also an early symptom, but is not very acute until suppuration has taken place or is about to occur. Swelling is present and very apparent early in the disease. When the palm is affected, the thick skin shows little elevation, but instead it will be seen on the dorsal surface.

The functions of the member are regularly impaired or lost, and we find it in a state of partial fixation and flexion. These patients may have one or more chills, fever, etc.; but the constitutional symptoms are not marked, and they do not seem very ill. The bowels are apt to be constipated.

How different is the picture when the periosteum is primarily involved! The pain comes on quickly, is violent and throbbing even in the small periostitis of the distal phalanx. The tenderness is exquisite, but the swelling is not very marked; indeed, it is out of all proportion to the other symptoms. The fever is not high, but chills are frequent without much if any sweating.

When a joint is the seat of septic infection we have great local pain and tenderness, especially on the slightest movement of the parts. The functions are entirely lost. In the earliest stage crepitus is plain enough, but as distention of the joint and circumarticular swelling come on this becomes less prominent. Later, if the articular surfaces are eroded and the fluid escapes, the crepitus becomes harsh and grating. Primary infection of tendon sheath gives quite a characteristic train of symptoms. The pain is most severe and extends up the hand and forearm. Swelling is of the deeper tissues and is not great externally. Tenderness is very acute at the particular point of inflammation and less so along the proximal side of the tendon. Deep pressure on the tendon at a distance seems to draw upon the adhesions that have formed around the inflamed area and causes great suffering. The whole hand is incapacitated and the patient looks very ill. The tongue is coated. The stomach will retain little or no food and constipation or diarrhea is nearly always present.

Chills and fever are regularly early and prominent symptoms. If we seek to control the pain with morphine, large and repeated doses are necessary.

Let it not be supposed for a moment that we claim that all cases can be divided in this more or less systematic manner. For instance, many cases of tendon sheath infection are due to extension by continuity from another structure. Likewise the finger is very apt to be infected from a septic paronychia or tendon sheath.

The prognosis depends upon, first, the virulence of the infection; second, a timely reaction in the patient; third, the structure involved; fourth, the method of treatment.

The virulence of the infection varies in different

cases, and in forming a prognosis is intimately connected with the resisting power of the individual.

It is difficult to think of them separately. Vicious, ill-fed, badly nourished people are apt to suffer much with mild infection, and alcoholic, nephritic, and diabetic subjects regularly do badly. Occasionally we see an apparently strong person infected time after time and in a manner that suggests very slight resistance. Where the subcutaneous tissue is alone involved, with proper treatment and in proper season, the prognosis is good.

The tendency of Nature is toward the formation of localized abscess, rupture through the skin, and granulation from the bottom of the cavity.

In septic arthritis, if not involved with periostitis, the chances of saving the member are good, but the joint function will be somewhat impaired and ankylosis may result.

In septic periostitis, where more important structures are not involved, the prognosis is good. However, the special danger of extension should be borne in mind and the prognosis likewise guarded.

Where the sheath of the tendon is involved we may indeed be anxious. The prognosis is *always* grave as regards the function of the part, and occasionally the life of the patient is in danger. Often the inflamed area becomes shut off from the rest of the sheath and the process becomes limited. In other cases, happily rare, no such protective process occurs and the infection spreads along through the palm, under the annular ligament, and thence up the forearm. If the extremity is saved, the deformity will be great and motion much limited, owing to the sloughing and adhesions of the tendons and their sheaths.

Treatment must be pursued along two lines, local and constitutional. The bowels should be unloaded by calomel or a saline, and such supporting and stimulating treatment adopted as the case seems to require. We have many times given tinctura ferri chlor. in ten- or twenty-drop doses every hour or two, and frequently it seemed to do good. There are cases in which the stomach will not bear the iron even when very well diluted.

Whisky or whisky and stimulants are indicated where the poison is having a depressing effect on the heart. We do not know why, but strychnine does seem to answer a better purpose in these cases than any other cardiac stimulant.

Nourishment should be given up to the full exertive power of the patient. In the case of very ill patients and or semiliquid food is indicated, and in the case of patients from two to three times as much.

Local Treatment.—If we have a patient with a variety within twenty-four hours of the onset of the disease, beginning with a moderate inflammation, and with a moderate tenderness, we might well wait for the formation of a carbuncle, and then attempt to cut it out. If the patient recovers it will be a great deal better than the end of that process than if it were to become a py-

improved we should search carefully for the most tender point and make an incision, taking care to avoid the sheath of tendon, joints, and periosteum. When we see the cases later, and all of the symptoms are severe, it would be better to make an incision at once, even though we find no pus. Especially is this the case on the palmar surface. The relief of tension by cutting the thick, tough skin often prevents a large slough or extension to deeper and more important structures. Wash out every incision with peroxide of hydrogen, drain with gauze, and apply a wet antiseptic dressing. For the later dressings we have found the saturated solution of acetate of aluminum as satisfactory as and perhaps more so than any other.

Where a finger joint is involved it should be incised and drained with gauze on either side. Outside of the antiseptic dressing, a splint will keep the parts quiet and add to the comfort of the patient.

Septic inflammation of the sheath of a tendon should be treated promptly with cold steel. The incision should be free and extend *down to the sheath*, but no farther until the field has been carefully inspected and the overlying connective tissue separated with a sharp knife. Then, if the sheath is found to contain fluid, incise it freely. If not, place a gauze drain in contact with it, but not pressing greatly upon it, and fill the external incision lightly with gauze. Watch carefully for an extension on its proximal side of the tendon, and if it occurs treat it as the primary point.

Septic periostitis should be incised as soon as the diagnosis is made. An exudate under that tense membrane will do much damage in a short time, and should be liberated at the earliest possible moment.

A word in conclusion as to a few general rules. Incision should always be ample in length to allow of proper drainage and facility of after-dressing. If too small, much pain will be given each time the drain is introduced.

Incisions should never be made directly over a palmar tendon, but always on one or both sides, and for this reason, that if you unexpectedly find the sheath of the tendon sloughing, or if it slough late in the course of the disease, the tendon itself will have nothing to confine it, and, owing to the position of flexion that the finger always assumes and the spasm of the muscle that is always present, the tendon is lifted up and stretched across the incision like a bowstring. After this occurs, of course it is doomed to slough beyond the proximal end of the incision.

All incisions should be made clear and clean with a sharp knife. No blunt dissection should be done and the parts should be handled as little as possible.

Always immobilize the affected part. If the dressing is not large enough to accomplish this, apply a splint.

And the main thing secured if we hope to do the best work. For small superficial incisions chloride of ethyl is sufficient. Much may be done with a two-per-cent.

solution of cocaine if skillfully distributed by the infiltration method. Schleich's local anæsthesia has been an utter failure in my hands for this class of cases. Do not hesitate to use a general anæsthetic where the work can not be thoroughly and satisfactorily done with local anæsthesia.

1332 LEXINGTON AVENUE.

THE HYPODERMIC INJECTION OF SILVER NITRATE OVER THE COURSE OF THE VAGI IN THE TREATMENT OF PULMONARY CONSUMPTION. *A PRELIMINARY REPORT.*

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VISITING PHYSICIAN TO
RUSH HOSPITAL FOR CONSUMPTION IN PHILADELPHIA, ETC.

ABOUT twelve years ago it occurred to me that the lung lesions which are found in pulmonary consumption do not represent the primary morbid changes in this disease, and that they are one of a series of superficial manifestations which are fundamentally dependent on a neurotic basis in which the vagi are seriously implicated. Further study has gone far to substantiate the correctness of my original impression, and has led to the conviction that a rational therapeutics of this most formidable affection naturally rests on a nervous pathology. Hence my armamentarium in the treatment of phthisis has for some years consisted principally of nervous stimulants, like strychnine, electricity, phenacetine, etc. More recently I began giving local attention to the vagi in the region of the neck by massaging, kneading, and compressing them through the overlying textures. These measures seemed to be of benefit so far as the cough, expectoration, and oppression in the chest were concerned, but it soon became evident that their influence was not far-reaching enough to be of decided value. About this time I learned of the usefulness of vagus stretching* in severe cough associated with exophthalmic goitre, and also in epilepsy, and thought of testing this operation in the treatment of phthisis, when it appeared to me that probably the subcutaneous introduction of some active although conservative irritant, like nitrate of silver, immediately over the course of the nerves in the neck might furnish the stimulus necessary to arouse them out of their abnormal condition. An effort was made to carry out the idea, and after many trials and failures it was found that from four to seven minims of a two-and-a-half-per-cent. solution of pure silver nitrate (Merck's) answered the purpose best in the greatest number of instances, although several cases required as much as five minims of a five-per-cent. solution to bring about the desired inflammatory reaction. The

* Stretching of the Pneumogastric Nerve. M. Jaboulay. *New York Medical Journal*, May 7, 1898, abstracted from *Lyon medical*, April 17, 1898.

TABULAR VIEW OF THE CONDITION OF FORTY PHTHISICAL PATIENTS BEFORE AND AFTER RECEIVING NITRATE-OF-SILVER INJECTIONS, DIVIDED ACCORDING TO STAGES. NO PATIENT TREATED FOR A MONTH OR LESS IS INCLUDED.

Incipient Cases.

No.	Age.	Time under observation.	Weight when first seen.	Loss or gain.	Cough and expectoration.	Physical signs.	Remarks.
1	Years. 38	6 weeks.	Pounds. 145	Neither.	Disappeared.	Very few remained.	Asthmatic phthisis. Lost eight pounds in a month before treatment.
2	26	2½ months.	169	Gained 4 lbs.	Very much improved.	Disappeared.	
3	18	2 months.	117½	Gained 9 lbs.	Very much improved.	Improved.	Rheumatic element in this case.
4	25	5 weeks.	119½	Gained 3 lbs.	Much better.	Improved very much.	Colored patient. It is well known that phthisis in this race responds slowly to treatment.
5	25	4 months.	109	Gained 16 lbs.	Disappeared.	Disappeared.	Hemorrhagic form.
6	27	6 weeks.	119 at time of first injection.	Gained 10 lbs.	Disappeared almost wholly after first injection.	Very much improved.	Lost one pound in three days preceding first injection. After injection gained at once. Weight at start still previous to third injection, then gained three pounds in two days. Patient colored.
7	60	16 weeks.	137 at time of first injection.	Gained 32 lbs.	Very much improved.	Disappeared.	Lost two pounds and a half in four days previous to first injection.

Advanced Cases.

1	23	2 months.	106½	Lost 7 lbs.	Very much better.	Improved.	Extremely erythritic case.
2	18	3 months.	113	Lost 6 lbs.	Improved.	Improved.	Attendance irregular.
3	29	2½ months.	113	Gained 2 lbs.	Improved greatly.	Improved.	Marked family history of phthisis.
4	44	3 months.	149	Lost 4 lb.	Much improved.	Improved.	Two weeks after first injection weight 155½ lbs.
5	24	2½ months.	119	Lost 2 lbs.	Much improved.	Improved.	Hemorrhagic case.
6	30	3 months.	126	Neither.	Almost entirely relieved for some time.	Improved.	His profuse night sweats also ceased after injections.
7	38	4 months.	105	Neither.	Almost entirely gone.	Very few remaining.	Improved very much in general strength.
8	29	1½ months.	125	Lost 2 lbs.	Almost entirely gone.	Much improved.	Asthmatic phthisis.
9	50	2 months.	114½	Lost 7 lbs.	Very much improved.	Much improved.	Although lost in flesh, she is doing very well.
10	52	2 months.	125½	Lost 1 lb.	Very much improved.	Much improved.	At first lost weight, then rapidly regained it.
11	28	2½ months.	133	Gained 7 lbs.	Improved greatly.	Much improved.	From last account, hemoptysis returned.
12	65	2 months.	139½	Lost 1 lb.	Improved greatly.	Much improved.	Doing remarkably well.
13	21	2 months.	134½	Gained 1½ lbs.	Cough subsided after first injection.	Much improved.	Is working.
14	42	3 months.	133	Gained 3½ lbs.	Very much better.	Much improved.	During first month's attendance reached 110 pounds.
15	38	4 months.	96½	Gained 13 lbs.	Entirely gone.	Much improved. Gone except dullness.	Abscess at seat of injection. Is working.
16	41	3 months.	130	Gained 6 lbs.	Entirely gone.	Much improved.	Lost in weight at first, then rapidly increased.
17	69	3 months.	132	Gained 1½ lbs.	Almost entirely relieved after first injection.	Almost gone.	Rapid recovery.
18	42	6 weeks.	137	Gained 16 lbs.	Practically gone. Cough unusually severe.	Much improved.	First six days gained seven pounds; marked gain after each injection.

Far-advanced Cases.

1	23	2 months.	117½	Lost 4 lbs.	Some relief.	Same.	Complicated with laryngeal mucrocoulis.
2	38	5 weeks.	102½	Gained 2 lbs.	Improved.	Improved.	Lost five pounds in two weeks before first injection.
3	25	5 weeks.	108	Lost 2 lbs.	Improved much at first.	Remained about same.	Night sweats, vomiting, and appetite improved at first.
4	41	2 months.	110	Gained 1 lb.	Improved.	Improved at first.	Vomiting, appetite, night sweats, general strength, sleep, expectoration much improved during first four weeks. Is frequently doing better.
5	34	3 months.	118	Loss not known.	Improved much. Lost a little weight.	Improved.	Appetite, weight, strength, night sweats much improved at first. Is better.
6	38	4 months.	111	Lost 9 lbs.	Very much improved.	Improved.	Appetite, strength, and night sweats improved. Is better.
7	36	4 months.	80½	Loss not known.	Improved. Almost recovered. Still a little cough.	Improved.	Improved for six months in every way, though still coughs.
8	43	2 months.	109½	Loss not known.	Very much improved. Had a good cough in periods, but recovered in a month.	Improved much at first.	Improved for eight months in every way. Now has decided improvement. Is working.
9	55	3 months.	106	Gained 4 lbs.	Very much improved.	Same.	General improvement in every way.
10	16	2 months.	105½	Gained 2½ lbs.	Very much improved. Cough still present.	Same.	General improvement in every way.
11	19	2 months.	131	Lost 4 lbs.	Very much improved.	Same.	General improvement in every way.
12	36	2 months.	98	Gained 1½ lbs.	Improved.	Improved.	General improvement in every way.
13	59	2½ months.	95	Gained 1½ lbs.	Improved.	Improved.	General improvement in every way.
14	52	4 months.	103½	Lost 4 lbs.	Very much improved.	Improved.	General improvement in every way.
15	47	2½ months.	117½	Gained 1½ lbs.	Very much improved.	Improved.	General improvement in every way.

point which has been selected for its administration is immediately over, or slightly behind, the pulsating carotid artery in the region of the neck, midway between the angle of the lower jaw and the clavicle. Other points along the artery have also been chosen. In order to avoid puncturing the carotid artery or its neighboring jugular vein it is important to lift the skin between the thumb and the forefinger of the left hand and introduce the needle just under the elevated skin. The silver solution alone produces considerable local pain immediately after its introduction, and in order to avoid this it is very necessary to precede it with an injection of five minims of a two-and-a-half-per-cent. solution of cocaine hydrochloride.

The following plan has thus far been found the most practical for the introduction of these agents: Inject the cocaine solution; detach the syringe from the needle, and let the latter remain in the puncture. Wash out the syringe with water, draw the silver solution into the syringe, attach the latter to the needle, and throw in the required amount.

The local visible effects of the injection show themselves in nodular, sometimes in diffuse swelling, and in redness and pain; but in no instance have these products become extremely pronounced. Small abscesses have occurred about a dozen times, and a slough once, in about three hundred injections, and two of these were produced by using too strong a solution of silver in the early stage of the experiment. Neither the rupture and discharge of the abscesses nor the small slough in the one instance had any detrimental influence on the patient.

The number of injections which are necessary depends upon circumstances. As a rule, it is a good plan to begin by giving one injection on the side of the neck on which the affected lung is situated.* In a week or ten days this is to be repeated, unless the original or previous injection is followed by too much irritation. In urgent cases due to excessive coughing I have repeated the injections in three or four days. As a rule, it seems best to concentrate the injections on the affected side, and to give an occasional one on the opposite side.

During the last five months I have used nitrate-of-silver injections on forty phthisical patients who were treated longer than a month, and who for convenience sake are divided into incipient (seven), advanced (eighteen), and far-advanced (fifteen) cases. The general effects of the injections on some of the symptoms

* On more frequent use it will be found that pressure over the course of the artery in the region of the neck produces more pain on one than on the opposite side in most phthisical patients, and that this hypersensitiveness usually corresponds with the side having the affected lung.

The general cases with beginning phthisis (ten) show coughing, expectoration, etc. Advanced cases (eight) without coughing, but otherwise showing marked expectoration, loss of appetite, etc. Far-advanced cases (seven) with marked coughing, expectoration, etc.

and conditions of these cases are briefly described in the following analysis:

Cough and Expectoration.—When these injections were first undertaken, it was entirely with a view of benefiting the cough and expectoration in this disease, and it was therefore gratifying to find that they fulfilled this expectation. With but few exceptions these symptoms improved in a marked degree, not only in the incipient and advanced cases, but in the great majority of the far-advanced cases. This was so striking that it could not be mistaken. Besides relieving the cough and expectoration, the injections had a good influence on dyspnea and oppression in the chest; and, as several patients expressed it, gave greater freedom in breathing.

Sleep.—It was noticed that many of the patients slept better. This was probably due to the fact that they did less coughing during the night than previously.

Appetite.—This function was improved in most of the patients, and in many to a marked extent. This was, of course, most noticeable in the incipient and advanced cases, although in nine of the far-advanced cases the appetite was remarkably increased.

General Strength.—This was greatly benefited in most of the incipient and advanced cases, and also in a number of the far-advanced ones. This is probably accountable on the score of a betterment in the digestive function.

Physical Signs.—In many of the incipient and in some of the advanced cases there was noticed a rapid improvement in the physical signs. This was so frequently observed that it could hardly have been merely coincidental.

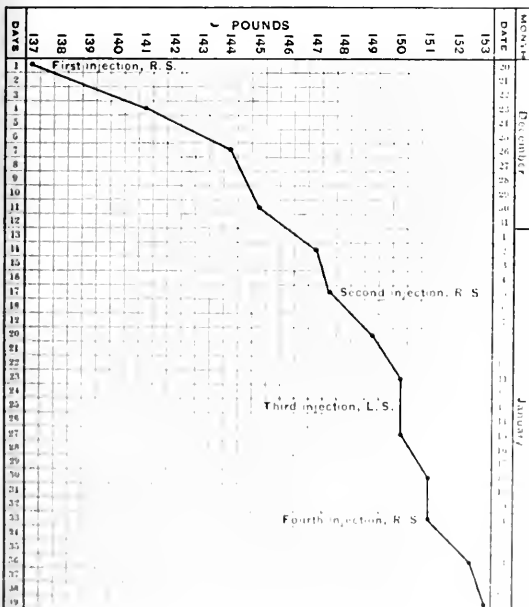
Weight.—As has already been stated, these injections were solely begun for the purpose of alleviating the phthisical cough and expectoration, and it was surprising, therefore, to find that they also exerted a most beneficial effect on the weight. The gain in weight was observed chiefly in the incipient and advanced cases, but was by no means confined to these, as will be seen in the table on page 195. The internal medication in all these cases was as simple and kept as uniform as possible throughout the experiment—a number of the patients receiving nothing but peppermint water.

The chart on page 197 graphically illustrates the immediate effects of the injections on the weight.

It will be seen that in this example, which refers to patient No. 18 in the list of advanced cases, the weight increased ten pounds and a half in seventeen days after the first injection. At this time another injection raised the weight two pounds and a half more in six days, when it came to a standstill. The third injection on the twenty-fifth day raised it a pound higher in three days, when it came to another standstill. The fourth injection on the thirty-third day raised it two pounds more in six days, when the last observation was taken. None of the other patients gained so rapidly as this one did, although No. 6 of the incipient cases gained

seven pounds in twelve days after the first injection, and three pounds in two days after the third injection; yet the direct effects of the injections on the weight and other conditions were just as apparent in most of the cases that did well. This was especially true of Nos. 3 and 7 of the incipient cases, and Nos. 11, 15, 16, and 17 of the advanced cases. Whether these effects are lasting time alone can determine, but the above histories show that they are at least of decided temporary value.

The deduction which may be drawn from this limited experience with the silver-nitrate injections are (1) that their best results are obtained in incipient cases, both in regard to the symptoms and physical signs of phthisis; (2) that in most of the advanced cases of this disease they have a good and, in some instances, an exceptional influence on the symptoms and physical signs; and (3) that in the great majority of the far-advanced cases they ameliorate the cough, expectation, and some other symptoms temporarily, but have little or no influence on the local condition of the lungs.



In conclusion, I believe that there is much reason for expecting that when this method, even in its present undeveloped state, is combined with other good hygienic, dietetic, and medicinal treatment, such as most of our patients did not receive, the practical benefit will be greater than that represented above. And, moreover, this investigation incidentally points out that the silver injections may play an important part in the therapeutics of asthma, chronic bronchitis, and in the prophylaxis

cal stage in the young which is indicated by a poor and capricious appetite, loss in weight and strength, anæmic, etc.; thus verifying the practice of the eminent Dr. Graves, who, more than fifty years ago, advised the employment of setons beneath the clavicle at the age of puberty whenever phthisis was apprehended.

FIVE RARE CASES OF TUBERCULOUS ULCERATION OF THE SOFT PALATE AND ADJOINING SOFT TISSUES. WITH MENTION OF OTHER CASES OF TUBERCULAR ULCERATION OF THE UPPER AIR PASSAGES.

By EDGAR D. SMITH, M. D.,

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TUBERCULOUS ulceration of the soft palate and the adjoining soft tissues in man is considered a very rare disease, rarely more than one dozen cases coming under the notice of the most famous throat specialists. Still it has occurred to me that were the general practitioner more familiar with this subject many more cases would be reported than have been, and this disease would be found not so rare as has formerly been supposed.

To this conclusion I am forced by observing the rapid progress of the disease and the difficulty in diagnosis after the coalescence of the small ulcers, which occurs on the second or third day after the "breaking down" of the separate miliary tubercles. After the coalescence of the small ulcers and the formation of the resulting large ulcer it might readily be mistaken for diphtheria. Again, before the rupture of the separate tubercles, it might readily be mistaken for a condition often seen where there are present minute vesicles containing a clear fluid. But a more serious obstacle to successful diagnosis is the failure of the patient to consult a physician until the large ulcer forms.

While putting these cases on record, I hope to make a few timely observations and bring anew this disease before my fellow practitioners, hoping that, in refreshing their memories, some case may be detected that might otherwise go undiagnosed.

It is altogether probable that the greater part of these cases are secondary to a tuberculous infiltration of the lungs, and that the soft palate and its neighboring tissues are infected by the tuberculous excretions from the lungs. A few of them are doubtless primary and follow from tuberculous dust coming in contact with an abraded mucous membrane. It may follow an abrasion from hot drink, catarrhal or follicular inflammation, or correlative to a cold.

Case II was doubtless of the latter sort, in a north-house, where the dust was so perceptible that it irritated

and congested the nasal mucous membrane so much as to close these cavities and induce mouth breathing. This same dust caused an abrasion of the mucous membrane of the affected parts, and a tuberculous infection followed the breathing in of tuberculous dust.

The nasal mucous membrane is not often infected, owing (in part at least) to the fine hairs at the entrance of the nostrils arresting mechanically the tuberculous bacilli. Still this does not fully explain the infrequency of nasal tuberculosis, and we are obliged to fall back on the oft-observed fact that certain parts are endowed by Nature with a resistance to certain microbes—Nature's wise provision for the preservation of the human kind.

When seen early, the affected part presents a congested appearance. This is followed by an unnatural paleness, which distinguishes it from the surrounding mucous surfaces. Following this come small, seedlike, grayish-white nodules, of the size of a small pinhead. In a few days these break down and small ulcers appear, which, in bad cases, are very numerous. On the second or third day (as mentioned before) these coalesce into a grayish-white superficial ulcer. Unless checked in this stage, this increases rapidly at the edges, and the patient rapidly loses strength and flesh, dying from exhaustion in a short time.

The exhaustion is out of all proportion to the extent of the ulcer, and to me is not easily explainable.

These ulcers are very resistant to medication, and I have found but one remedy that gives satisfactory results. This remedy is a mixture of equal parts of lactic acid and glycerin, applied freely to the ulcer. Under a daily application of this mixture such ulcers as can be easily reached and freely stimulated heal kindly. This may not be true of all cases, but it has been true of at least a dozen that I have personally observed.

CASE I.—A married woman, thirty years of age, came to me in April, 1894, suffering from tuberculous infiltration of the lungs. The right lung was diseased throughout its entirety, while the left lung was apparently free from disease, except at its apex.

The extent of the disease caused me to give an unfavorable prognosis, especially as the larynx was congested, and presented the appearance of what Professor Brown, of the Chicago Polyclinic, is pleased to call the "laryngitis of tuberculosis."

Despite the prognosis, the patient gained in weight and strength, and the laryngitis disappeared under stimulating applications of sulphate of copper, five-per-cent. strength.

In May the patient ceased to come to my office for treatment, and I did not see her again until the early part of June, when, after an absence of four weeks, she returned with a small tuberculous ulcer of the larynx. A few applications of equal parts of lactic acid and glycerin caused the ulcer to heal. I then renewed the former astringent application and she again showed improvement.

During this absence she had lost some weight and more strength, which seemed due to the ulcer mentioned.

In July she again ceased to come to my office, having

nearly twenty miles to come, and her husband, an ex-druggist, made the necessary applications.

I protested against this latter absence, explaining that the applications were very difficult to make in a proper manner, but her husband was certain of his ability to make them.

At first he made them quite successfully, but later he neglected the most important part, the drawing out of the tongue, and failed to reach the larynx.

She agreed to come to my office twice a week, but remained away two weeks. When she made her appearance again the soft palate, the anterior and posterior pillars of the fauces, the tonsils, and the corresponding parts of the sides and posterior walls of the pharynx were thickly studded with milium tubercles. Some of these were ruptured, and the others were about to rupture.

She was now thoroughly frightened and put herself under my daily care. The next day each tubercle was replaced by a small ulcer, and the following day they had coalesced, presenting the appearance of a continuous ulcer of a dirty, grayish-white appearance. In a week, under the lactic acid and glycerin, this ulcer had cicatrized, but she had lost so much strength that she died on the ninth day from exhaustion.

I have always thought that starvation was the chief cause of the exhaustion, since swallowing was so painful that she even avoided water. A few hours before death she sought out and took some food, getting out of bed and going through several rooms, in order to secure this. Her throat had so far healed that swallowing was possible.

CASE II.—This patient has recently come under my observation. He is a man about thirty years of age and has suffered from a cough for some weeks. On December 10, 1898, his wife sent for me, thinking he had diphtheria.

On looking at his throat I found the soft palate, the uvula, and a part of the anterior and posterior faucial pillars studded with minute tuberculous ulcers. A few tubercles were unruptured. I recognized the disease at once (once seen, its recognition is easy), and on the following day made the application before named. At this time I told his wife of its nature and its import. On the second day of my attendance the minute ulcers had become a continuous ulcer. The improvement following the application of glycerin and lactic acid was rapid, and on the 14th inst. the ulcer was nearly healed. Since then the improvement has continued, and his throat is now well, December 21, 1898.

An examination of his chest, December 19, 1898, revealed an infiltration of the entire right lung, most marked in the posterior part of the middle lobe. To me this does not present a hopeless case, since the prompt repair of the ulcers in and about the soft palate and uvula shows a recuperative power quite hopeful for the patient, the more so as I have seen several with more advanced cases entirely recover.

CASE III.—A man, thirty-five years of age, consulted me for a "sore throat." On examination I found the throat very much congested and somewhat edematous. On the following day the soft palate, the uvula, and the anterior pillars of the fauces had assumed a pale color (unnaturally so). At this time I did not recognize the disease, but on the following day the parts before mentioned were studded with milium tubercles.

On the first day I ordered two drachms of tincture of chloride of iron combined with six drachms of glycerin, applied to the throat, every two hours, with a brush. This gave no relief and the pain grew more acute.

On the third day I became aware of the nature of the disease and made a local application of a fifty-per-cent. solution of lactic acid in glycerin. This had the desired effect, and the parts became less painful, and the tubercles remained unruptured. Though the patient has not entirely recovered, the tubercles are being absorbed and recovery seems assured.

CASE IV.—This patient came to my office on the fourth day of the progress of the preceding case under my care. The patient, a woman of about thirty, presented the same appearance as the preceding patient—both as to location and result. The tubercles were just forming, and the mucous membrane was still unnaturally pale. She had been suffering from hoarseness and painful deglutition for some weeks. Of late the pain had become more severe and swallowing was almost impossible.

It is too early yet to report the ultimate result, but the tubercles are now fast disappearing and the pain is much less and deglutition quite easy. She promises to make a rapid recovery.

CASE V.—A young man, twenty years of age, came to my office suffering from endocarditis complicating influenza. This readily yielded to treatment, but it was followed a week later by a "sore throat." On making a careful examination, I found the intense redness that accompanied his influenza was replaced by an abnormal paleness, and within this area of paleness were to be seen some small nodules. These seemed to me to be tuberculous, and I gave a placebo, asking him to return on the following day. He returned as requested. The nodules were not numerous, but their tuberculous character was clearly evident. I at once applied lactic acid in an equal quantity of glycerin, and the nodules, which were limited to the soft palate, uvula, and anterior pillars of the fauces, were absorbed without rupture.

It is yet too early to give the ultimate results, but the present improvement gives promise of a speedy recovery.

Of laryngeal tuberculosis I have seen and treated at least one dozen cases; but one of these deserves special mention. This was a case of mixed infection in a young man about twenty-five years of age. He came to my office after being under the care of a competent physician about seven months. His chief reason for consulting me was a syphilitic ulceration of the epiglottis, vocal cords, and neighboring soft tissues. I required, as usual, a pledge of remaining under my care until I should pronounce him well. This he gave readily, but he ceased to consult me as soon as the ulcerative process was entirely relieved. I met him often and urged the necessity for further treatment. He gave promises galore, but stopped with these.

Two years later he again sought my office for "pain in the throat." An examination revealed ulcers over the arytenoid cartilages and involving the posterior portion of the cords. I gave him the iodules and mercury internally and lactic acid and glycerin as a local

application. The ulcerative process checked in a brief period, but he rapidly lost flesh, and died ten days later. The night of his death he was about the house and in good spirits and cheerful, expressing a confidence of his sure recovery.

I had told his friends that death was imminent and might occur during the night, but they left him without an attendant and found him dead in bed the next morning.

This sudden death in mixed laryngeal ulcers I have noticed in several cases, and when it is recognized (mixed laryngeal ulceration) the attending physician should give a guarded prognosis.

I do not claim any originality in the treatment or description of symptoms in the cases under discussion, but I am hopeful that this refreshment of the memory may aid in the recognition of cases that might otherwise go unrecognized.

306 DIVISION STREET.

Therapeutical Notes.

Against Insolation.—The *Riforma medica* for December 16th recommends a teaspoonful of the following mixture every quarter of an hour until the complete disappearance of symptoms:

R Solution of trinitrine (1 to 1,000) 20 drops;
Water 4,500 minims.

M.

When amelioration begins the doses should be progressively diminished. Tepid compresses of arnica may also be applied to the head.

For Smoker's Stomatitis.—The *Riforma medica* for December 16th recommends:

R Salol 15 grains;
Catechu 30 "
Spiritus of peppermint 750 minims.

M.

A teaspoonful in a tumblerful of hot water for a colatory.

The Treatment of Phthisis.—Goldmann (*Riforma medica*, December 23d) recommends:

R Carbamate of guaiacol, }
Sulphilithyolate of } of each 225 grains;
ammonium, }
Pure glycerin 600 minims;
Peppermint water 150 "

M.

Twenty to thirty drops to be taken daily.

For Tetanic Contraction of the Uterus.—*Riforma medica* for January 2d credits the following prescription to Muller:

R Tincture of iodine 15 grains;
Alcohol 30 "

M.

Five drops in half a tumblerful of hot water every half hour.

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THE PASSING OF THE TRAINED WRITER.

YEARS ago there sprang up in our country, and perhaps in other lands, a feeling of contempt for accuracy of language, to say nothing of its niceties. "I had rather have one man of common sense than all the grammarians that were ever born," or some equivalent declaration, was frequently heard, and, however much the judicious grieved, the masses applauded. What have been the results? Speech has degenerated, and so has the written language. Many of our people say "probably" when they mean only *perhaps*, to the utter consternation of persons who take words at their true meaning. Statutes have been enacted that can not be parsed and are therefore needlessly difficult to interpret. For a long time syntax was practically neglected in the schools, or else they taught the innovations of a pseudo-grammarian who did his best to play havoc with our time-honored idioms and particularly with the tenses of the verbs in subsidiary clauses. What men wrote for publication came to be esteemed rather for its daring disregard of simplicity and directness of statement than for any display of those fundamental beauties of diction. The great public demanded that the account of any exciting achievement should be written by the man who "did the thing," utterly regardless of his ability to write comprehensibly. Consequently our magazines teem with more or less unintelligible articles; but they are exciting or "sensational," and that satisfies the public desire.

All this has been observed with deep regret by a few who appreciate the importance of preserving the purity of the language, and we are happy to be able to say, for the last four or five years there has been gratifying evidence that the schools have at last come to a realizing sense of their remissness. We understand that rhetoric is now taught as it ought to be taught, and the style of writing counts in examination papers. But much irreparable wrong has been done. It has extended to the medical profession, many of whom, while unquestionably masters in medicine and surgery, are quite incapable of writing with the clearness and cogency indispensable to an adequate exposition of their ideas, or else imperil the credence their statements

might otherwise meet with by coupling them with other statements that are manifestly and ludicrously, though quite unintentionally, false. One effect that the practical extinction of literary capability has had has been to impose upon conscientious editors a grievous and utterly unnecessary task, that of correcting errors of expression and expunging nonsensical statements. We think we may truthfully profess to have exercised quite the average degree of carefulness in performing that portion of the task that has fallen upon us, but we are aware that gross errors sometimes escape our vigilance. Like all other journals that have the respect of their readers, this one is not responsible for the views expressed by contributors, but we do charge ourselves with the work of keeping our columns free from statements that are palpably incorrect.

We greatly regret that an article appeared in this journal for December 10th which contains statements that ought not to have eluded our notice. We regret it all the more because the article was made prominent by being accompanied by colored plates themselves bearing the absurd expression *Plasmodium malaria*. As a matter of fact, these blemishes did not escape our notice, for we distinctly remember setting numerous awkward expressions right and expunging statements that we could not allow to go into the journal. However, by some unfortunate accident, the set of proofs that was corrected in the office never reached the printer. We are indebted to our highly esteemed contemporary the *Cleveland Journal of Medicine* for calling attention to some of the article's peculiarities in its January issue and to several correspondents for pointing out other errors.

THE MORTALITY STATISTICS OF HAVANA.

TOWARD the close of December Sanitary Inspector W. F. Brunner, of the Marine-Hospital Service, rendered to Major-General Francis V. Greene, then in command in Havana, a tabulated report of the mortality of the city for the period embraced between the 1st of January and the 22d of December, 1898. By the courtesy of General Greene we have been enabled to examine Dr. Brunner's report. The table shows 19,271 deaths from all causes. The population of Havana is about 200,000, so that the total number of deaths makes a mortality rate of nearly ten per cent. In round numbers, this is five times as high as the rate for the city of New York, and that, too, for a year in which there were fewer than the usual number of deaths from yellow fever. The figures are as follows: Yellow fever, 136; typhoid fever, 1,030; pernicious fever, 529; malarial

fever, 1,373; dysentery, 1,359; enteritis, 3,149; diphtheria, 21; small-pox, 186; beri-beri, 9; glanders, 8; starvation, 215; pneumonia, 317; tuberculosis, 2,819.

The decrease in the number of deaths from yellow fever is accounted for by Dr. Brunner by the fact that during the year 1898 but few Spanish troops were brought to Cuba. Beginning in April, 1896, he says, an epidemic of small-pox swept Havana, and by the close of the year 1897 it had caused nearly 2,500 deaths, almost exclusively among the natives. Practically, he adds, small-pox has now disappeared from Havana, but is still epidemic in several parts of Cuba.

"The enormous death-rate from tuberculosis," says Dr. Brunner, "is a result of bad hygienic surroundings, meaning bad food, bad homes, and bad morals." The great number of deaths from dysentery and enteritis he attributes to a scant and bad food supply. With 215 deaths attributed to starvation alone, the conclusion can hardly be avoided that insufficient and unwholesome food played no inconsiderable part in the mortality from other diseases than dysentery and enteritis. It becomes more and more evident that we have a tremendous duty to perform in Havana in the way of sanitation. It is to be hoped that the government will take the matter in hand promptly and push the work forward with all the speed that may be compatible with thoroughness.

MINOR PARAGRAPHS.

A COMPARISON OF HYDRASTININE AND COTARNINE.

Rousse (*Archives internationales de pharmacodynamie*, iv, 3, 1, and v, 1, 2; *Centralblatt für Gynäkologie*, January 21st) has found hydrastinine hydrochloride, in pill form, very effective in uterine hæmorrhages, phthisical night sweats, hæmoptysis, epilepsy, and nephritis. Its hæmostatic action is particularly shown in all cases of congestive metrorrhagia, in menorrhagia, in hæmorrhage after parturition and abortion, in hæmorrhage consequent upon displacements of the uterus or diseases of the annexa, and in hæmorrhage during pregnancy and labor. In myoma and carcinoma it is of no use. It has no unpleasant effects; it does not upset the stomach even when given in large doses. Cotarnine hydrochloride slows the action of the heart and gives tone to it, so that it is of great value after hæmorrhage. On the other hand, it has a vasomotor action, although it strengthens and accelerates the contractions of the gravid uterus. Hydrastinine is, therefore, easily distinguished from cotarnine by its greater rapidity of action, so that it may be recommended as a tranquilizer in cases of ether and sulphur, the former being more powerful, but more penetrating, and the latter being more available in chronic uterine affection, especially in the earlier stages. Both drugs strengthen the power of the heart, probably in a way on them. Hydrastinine acts on the uterine and intestinal blood vessels, contracting them. The author thinks, therefore, that hydrastinine

dies are useful in hæmorrhage due to uterine atony, but hydrastinine is to be preferred.

A FINAL WORD ON *PER OS* AND "*PER OREM*."

We are glad to be able to announce that our correspondent "*Boston*" accepts our statement that *per os* is right and *per orem* wrong. Indeed, he himself furnishes us with a passage from a classical author—Ovid. He thinks—which, as he remarks, settles the question. The passage is: *Os homini sublime dedit, calumque lueri*.

THE NOUVELLE ICONOGRAPHIE DE LA SALPÊTRIÈRE.

THE issue of this journal for November and December, 1898, may be regarded as a Charcot memorial number. It gives a full account of the inauguration of the statue erected to the memory of that famous physician scientist in Paris, including the orations of Professor Brouardel, Dr. Navarre, Professor Raymond, Professor Cornil, and M. Leygues, Minister of Public Instruction. There is an admirable representation of the Charcot statue as a front-piece, while at the end of the journal is a very interesting account of Charcot as an artist, accompanied by eight plates reproducing his designs, and numerous cuts in facsimile. The writer of the article concludes thus: "And who knows? If by chance in the early family council which decided his destiny, Charcot had preferred art to medicine, is it not possible that even then he would have succeeded in making his name illustrious?"

OIL OF WINTERGREEN IN THE TREATMENT OF CHOREA.

According to Luigi (*Riforma medica; Gazette hebdomadaire de médecine et de chirurgie*, January 8th), Professor Bozzolo, who introduced oil of wintergreen as a remedy for rheumatism, has demonstrated also its antipyretic action in erysipelas and scarlet fever and its antiseptic virtues in urinary and pulmonary diseases. In Bozzolo's clinic it is now looked upon as the most available of the antirheumatic in the treatment of chorea in children. The oil of gaultheria, combined with its own weight of vaseline, is employed locally over painful joints, and not only ameliorates the pain, but also benefits the chorea.

THE GAZETTE MÉDICALE DE PARIS.

THIS well-known journal, now in the seventh year of its publication, is said to be the best French medical periodical. In the issue for January 11th we find the name of Dr. Marie Rodière as the new editor in chief. It is announced that the *Gazette* will be enlarged, that more illustrations will be added, and that other respects the features of the journal will be improved.

ALBUMINURIA AND GLYCOSURIA AFTER HEAD INJURY.

THE following cases were reported by Dr. J. B. Bouchard, of Lyons, in the *Revue médicale*, 1898, No. 10, p. 100. The first case was that of a man, 40 years of age, who had been injured by a fall from a height of 10 meters, and who had been in the hospital for 10 days. The second case was that of a woman, 35 years of age, who had been injured by a fall from a height of 5 meters, and who had been in the hospital for 10 days.

sary to examine the urine immediately after the injury, before the abnormal state of the secretion has time to develop in consequence of the hurt.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending February 4, 1899:

DISEASES.	Week ending Jan. 28.		Week ending Feb. 4.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	14	6	12	5
Scarlet fever.....	202	11	229	18
Cerebro-spinal meningitis.....	0	6	0	4
Measles.....	174	13	153	12
Diphtheria.....	197	30	182	40
Croup.....	10	3	14	9
Tuberculosis.....	200	191	198	189
Small-pox.....	0	0	1	0
Chicken-pox.....	27	0	35	0

The Western Ophthalmological, Otological, and Laryngological Association.—The annual meeting was held in New Orleans, on Friday and Saturday, February 10th and 11th, under the presidency of Dr. J. Elliott Colburn, of Chicago. In addition to the president's address, the programme included the following titles: Address of Welcome, by Dr. Charles Chassaignac, of New Orleans; Response, by Dr. B. E. Fryer, of Kansas City; Historical Notes relating to Strabismus and other Anomalies of the Eye Muscles, by Dr. George T. Stevens, of New York; The Treatment of Acute and Chronic Glaucoma, by Dr. Dudley S. Reynolds, of Louisville; Profuse Hemorrhage Subsequent to Extraction of Senile Cataract, by Dr. B. E. Fryer, of Kansas City; Luxation of Both Lenses giving Rise to Glaucoma, by Dr. A. R. Amos, of Des Moines, Iowa; Some Experiences with Dr. Gould's Method of Prismatic Exercises, by Dr. Cassius D. Westcott, of Chicago; The Percentage of Color Blindness to Normal Color Vision as computed from 308,919 Cases, by Dr. J. A. Mullen, of Houston, Texas; Some Experiments with the Giant Magnet, by Dr. Hamilton Stillson, of Seattle, Washington; The Treatment of Diseases of the Lacrymal Duct by Cataphoresis, with an Exhibition of Cupped Sounds, by Dr. C. F. Keiper, of Lafayette, Indiana; Further Observations concerning the Check Ligament, by Dr. J. Elliott Colburn, of Chicago; Glioma of the Medulla, with a Report of Autopsy and Microscopical Examination, by Dr. Casey A. Wood, of Chicago; Spontaneous Hemorrhage of the Nasal Septum, by Dr. Marcel Nattier, of Paris, France; Synopsis of the Functions of the Eustachian Tube, Mastoid Cells, Tensor Tympani, and Stapedius, by Dr. Thomas F. Rumbold, of St. Louis; Vicarious Menstruation through the Intact External Auditory Canal, by Dr. K. K. Wheelock, of Fort Wayne, Indiana; The Diagnosis and Treatment of Incipient Laryngeal Cancer, by Dr. Max Thorne, of Cincinnati, and Dr. W. Scheppegrell, of New Orleans; The Principles of the Therapeutics of Stuttering, by Dr. R. Coen, of Vienna, Austria; The Indication for Middle-ear Operations, by Dr. W. L. Billerbeck, of Chicago; The Offending Middle Turbinate, by Dr. Edwin P. Johnson, of Chicago; The Relation of Trachoma of the Conjunctiva to Diseases of the Nose, by Dr. C. Zaem, of Warsaw, Russia; Collective Investigation as to the Relative Frequency of Adenoids

in Different Parts of the Country, by Dr. E. C. Ellett, of Memphis; The Best Vision after Cataract Extraction, by Dr. W. E. Driver, of Norfolk, Virginia; A Case of Bell's Palsy and Epilepsy cured by Correction of Anisotropia and Heterophoria, by Dr. L. R. Culbertson, of Zanesville, Ohio; Injuries of the Eyeball, with a Report of Cases, by Dr. E. O. Sisson, of Keokuk, Iowa; 1899 Skiascope, by Dr. J. Ellis Jennings, of St. Louis; A Study of Conjunctival Ulceration, by Dr. H. McI. Morton, of Minneapolis; The Congenital Arrest of Development of the Cornea, by Dr. K. K. Wheelock, of Fort Wayne, Indiana; A Report on the Operative Treatment of Myopia, by Dr. H. V. Würdemann, of Milwaukee; The Etiology and Importance of Iritis, by Dr. H. H. Brown, of Chicago; The Pathology of Cataract, by Dr. Adolph Alt, of St. Louis; The Surgery of the Accessory Sinuses of the Nose, by Dr. Augustus McShane, of New Orleans; Empyema of the Accessory Sinuses of the Nose, by Dr. W. W. Bulette, of Pueblo, Colorado; Medication of the Tympanic Cavity, by Dr. M. A. Goldstein, of St. Louis; Agoraphobia in Relation to Diseases of the Ear, by Dr. A. A. Guye, of Amsterdam, Holland; The Importance of the Early Recognition and Treatment of Catarrhal Diseases, by Dr. William Scheppegrell, of New Orleans; Fifty Mastoid Operations, including Four Brain Abscesses and One Perforation of the Sigmoid Sinus, by Dr. D. Milton Greene, of Grand Rapids, Michigan; A Case of Temporal Abscess Drained through the Attic after Ossiculectomy and Curettement, by Dr. Hamilton Stillson, of Seattle, Washington; The Radical Treatment of Fibroid Nasopharyngeal Polypi, by Dr. E. J. Moure, of Bordeaux, France; Refraction of the Trachomatous Eyes, by Dr. E. E. Hamilton, of Wichita, Kansas; Large Tumor of the Brain encroaching on the Motor Area and causing Few Symptoms save Optic Neuritis; with Remarks on Double Neuritis as a Sign of Brain Tumor, by Dr. J. Moores Ball, of St. Louis; Some of the Failures, Immediate and Remote, encountered after Cataract Extraction, by Dr. J. Morrison Ray, of Louisville; Keratitis Herpetica, by Dr. S. S. Ledbetter, of Birmingham, Alabama; Ulcerative Keratitis and how to Cure it, by Dr. R. F. Lemond, of Denver; A Series of Cases of Keratitis, with Reports of Blood Examination, by Dr. E. C. Ellett, of Memphis; Uric Acid as a Factor in the Causation of Chorioiditis, by Dr. Randolph Brunson, of Hot Springs, Arkansas; An Ophthalmologist's Experience with the Army, by Dr. J. J. Kyle, of Marion, Indiana; Persistent Pannus cured as a Result of Acute Daeruoeystitis, by Dr. J. Ellis Jennings, of St. Louis; Indications for Operative Interference in Chronic Suppurative Otitis, by Dr. Norval H. Pierce, of Chicago; Congenital Nasal Atresia, by Dr. Hal Foster, of Kansas City; Laryngeal Disturbances in Diseases of the Nervous System, by Dr. Jonathan Sendziak, of Warsaw, Russia; Tuberculosis of the Tonsils, Pharynx, and Larynx, by Dr. W. T. Grove, of Eureka, Kansas; Tuberculous Fleets of the Pharynx, by Dr. W. L. Dayton, of Lincoln, Nebraska; The Diagnosis and Treatment of Tuberculous Laryngitis, by Dr. George Knapp, of Vincennes, Indiana; and The Diagnostic Importance of Cough, by Dr. Fayette C. Ewing, of St. Louis.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 4th inst., Dr. I. N. Love read a paper entitled Some Personal Experiences and Observations with *La Grippe*.

The Buffalo Academy of Medicine.—At the last meeting of the Section in Surgery, on Tuesday evening,

the 7th inst., the following papers were presented for discussion: Stricture of the Lacrymal Duct; Treatment by Electrolysis and Otherwise, by Dr. B. H. Grove; and The Treatment of Hernia without Operation, by Dr. William C. Phelps.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, plague, and cholera were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending February 4, 1899:

Small-pox—United States.

Clarke, Ala.	Jan. 27	Small pox present.
Clay, Ala.	Jan. 27	Small pox present.
Dallas, Ala.	Jan. 27	Small pox present.
Greene, Ala.	Jan. 27	Small pox present.
Hale, Ala.	Jan. 27	Small pox present.
Lowndes, Ala.	Jan. 27	Small pox present.
Marion, Ala.	Jan. 27	Small pox present.
Mobile, Ala.	Jan. 1-27	7 cases.
Randolph, Ala.	Jan. 27	Small pox present.
Palaski County, Ark.	Jan. 27	Several 1 death.
Washington, D. C.	Jan. 14-21	1 case.
Cairo, Ill.	Jan. 27	2 suspicious cases.
Indianapolis, Ind.	Jan. 22	3 cases, origin unknown.
Louisville, Ky.	Jan. 23	1 case on river steamer.
Detroit, Mich.	Jan. 7-11	7 cases.
Clay County, Miss.	Jan. 27	Small pox present.
Jones County, Miss.	Jan. 27	Small pox present.
Hattiesburg, Perry County, Miss.	Jan. 27	17 cases in pest-house.
Lauderdale County, Miss.	Jan. 27	Small pox present.
Noxubee County, Miss.	Jan. 27	Small pox present.
Tishomingo County, Miss.	Jan. 27	Small pox present.
Omaha, Neb.	Jan. 17-22	7 cases.
Jersey City, N. J.	Jan. 15-22	2 "
Dunkirk, N. Y.	Jan. 14-21	2 "
Laredo, Texas.	Jan. 14-21	27 " 8 deaths.
Alexandria, Va.	Jan. 23-29	17 "
Portsmouth, Va.	Jan. 27	16 "
Richmond, Va.	Jan. 25	1 case.

Small-pox—Foreign.

Antwerp, Belgium.	Jan. 1-7	4 cases.
Bombay, India.	Dec. 20-27	2 deaths.
Calcutta, India.	Dec. 10-17	1 death.
Mexico City, Mexico.	Jan. 15-22	1 "
Halifax, N. S.	Jan. 28	1 case among Russian immigrants.
Moscow, Russia.	Dec. 24-31	13 cases.
Moscow, Russia.	Dec. 31-Jan. 7	7 " 1 death.
Odesa, Russia.	Jan. 1-7	1 case.
Constantinople, Turkey.	Jan. 2-9	11 deaths.
Smyrna, Turkey.	Dec. 25-Jan. 1	2 "

Yellow Fever.

Barranquilla, Colombia.	Jan. 2-9	1 case.
Vera Cruz, Mexico.	Jan. 12-19	2 deaths.

Plague.

Hongkong, China.	Dec. 10-17	1 case.
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Cholera.

Bombay, India.	Dec. 20-27	2 deaths.
Calcutta, India.	Dec. 10-17	16 "

An "Osteopathist's" Suit against a Medical Journal.—At the recent meeting of the Medical Society of the State of New York, the following preamble and resolution, introduced by Dr. A. M. Phelps, of New York, were adopted unanimously:

Whereas, We, the regular practitioners of medicine, are opposed to anything which under color of law, or in the operations of charlatans without medical license, and

thists" have received legislative recognition in several States; and

Whereas, A certain William Smith, osteopathist, has been denounced, together with his fellow charlatans, by the *Medical Age*, and now brings suit against both the publisher and editor of the *Medical Age* for damages in the sum of twenty-five thousand dollars:

Therefore, Be it declared the sentiment of the Medical Society of the State of New York that the editor and publisher of the *Medical Age* are entitled to the sympathy of the members of this society and of all medical practitioners: that we wish them success in repelling this legal assault; that we recognize in their action a valuable effort toward the suppression of such irregularities in medicine; and that we recognize that when the *Medical Age* takes such a bold stand in opposition to quackery it promotes the interests of legitimate and honorable medicine and the welfare of humanity.

A New Baltimore Quarterly.—The *Journal of the Alumni Association of the College of Physicians and Surgeons, Baltimore*, is one of the new medical periodicals. It has now reached its fourth number. It is edited by Dr. William S. Gardner.

The Late Dr. Judson C. Smith.—At a meeting of the medical staff of the DeWitt Dispensary, held February 1, 1899, the following resolutions were unanimously adopted:

Whereas, It has pleased Almighty God to remove our late associate, Dr. Judson C. Smith; and

Whereas, As colleagues we had reason to respect his professional attainments and his character as a man and a physician, recalling the friendship which existed in our work in the dispensary; therefore, be it

Resolved, That by the death of Dr. Smith we feel that the medical profession has lost an active, conscientious member;

Resolved, That we extend our profound sympathy to the family of Dr. Smith in the hour of their bereavement;

Resolved, That a copy of these resolutions be sent to the family of the deceased and to the medical press.

[Signed.] JOHN H. FRENCH, M. D.,
WILLIAM B. NOYES, M. D.,
SILAS F. HALLOCK, M. D.

Changes of Address.—Dr. William Richter, to No. 320 Second Avenue; Dr. M. Weiss, to No. 217 East One Hundred and Fourth Street.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 28 to February 1, 1899.*

ACKER, GEORGE W., First Lieutenant and Assistant Surgeon, is honorably discharged from the service of the United States.

APPEL, ARON H., Major and Surgeon, is relieved from temporary duty at Fort Hancock, N. Y., and will proceed to Fort Clark, Tex.

DECKER, OLIVASOR, Major and Brevet Surgeon, will proceed to Havana, Cuba, as acting commanding general, Department of Cuba.

GLISSAN, JAMES T., Major and Brevet Surgeon, is relieved from duty at Fort Hancock, N. Y., and will proceed to Manila, P. I., as acting assistant for duty.

GREENLEAF, CHARLES B., Colonel and Assistant Surgeon-General, will proceed to Savannah, and there take passage on the hospital ship *Bay State* to Cienfuegos, Cuba, stopping at such intermediate places as may be designated by the surgeon-general of the army, for the purpose of inspecting the medical department at those stations. From Cienfuegos Colonel Greenleaf will proceed to such other places in Cuba as may be necessary, to inspect their sanitary condition and to perfect arrangements for the care of the sick.

LEWIS, WILLIAM F., Captain and Assistant Surgeon, is assigned to temporary duty as examiner of recruits in Baltimore.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon, is relieved from further duty on the hospital ship *Bay State*, now at Savannah, and will proceed to Avila and report to the commanding officer of the battalion of the Fifteenth Infantry at that place for duty.

MAUS, LOUIS M., Lieutenant-Colonel and Chief Surgeon, is relieved from further duty with the Seventh Army Corps, and will proceed to Fort Hamilton, New York, for duty.

ROBERTS, GEORGE W., Captain and Assistant Surgeon, is honorably discharged from the service of the United States.

THOMASON, HENRY D., Major and Brigade Surgeon, is relieved from temporary duty at Fort Clark, Texas, and will proceed to his home and await orders.

WINN, WILLIAM B., Major and Brigade Surgeon, will proceed to Havana for duty.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending February 4, 1899:*

ANGENY, G. N., Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the *Indiana*.

ANGENY, G. L., Assistant Surgeon. The order detaching him from the Naval Hospital, Chelsea, Massachusetts, and ordering him to the *Indiana* is revoked.

BALDWIN, L. B., Surgeon. Detached from the naval recruiting rendezvous, New York, and ordered to await orders.

BERTOLETTE, D. N., Surgeon. Detached from the *Vermont* and ordered to duty as a member of the medical examining board, Washington.

BEYLER, H. G., Surgeon. Detached from the *Amphitrite* and ordered to the *Wabash*.

BLOOMGOLD, D., Medical Director, retired. Detached from special duty at New York and ordered home.

BOGERT, E. S., Medical Director, retired. Detached from special duty at New York and ordered home.

BOGERT, E. S., JR., Passed Assistant Surgeon. Ordered to additional duty in attendance on officers of the navy and marine corps at New York.

CLIBORN, C. J., Medical Director. Detached from duty in charge of the Naval Hospital, Norfolk, Va., and ordered to the Naval Hospital, Philadelphia.

COBLE, C. H., Medical Director, retired. Detached from the Naval Hospital, Philadelphia, and ordered home.

CRANE, T. C., Surgeon, retired. Detached from duty as a member of the board of medical examiners, New York, February 1st, and ordered home.

CURTIS, L. W., Surgeon. Ordered to the *Vermont*.

DICKINSON, D., Medical Inspector. Detached from the *Philadelphia* and from duty as fleet surgeon of the Pacific Station.

DUNN, H. A., Assistant Surgeon. Detached from the *Cincinnati*, when put out of commission, and ordered to the Naval Hospital, Chelsea, Massachusetts.

EDGAR, J. M., Surgeon. Detached from the *Cincinnati* and ordered to the *Richmond*.

FEEBEE, N. M., Medical Inspector. Ordered to the Naval Hospital, Norfolk, Virginia.

FIELD, J. G., Assistant Surgeon, retired. Detached from the *Richmond* and ordered home.

FREEMAN, G. F., Assistant Surgeon. Detached from the *Arethusa* and ordered to temporary duty on the *Vermont*.

GARTON, W. H., Assistant Surgeon. The order detaching him from the *Supply* and ordering him to the Washington Navy Yard is revoked.

HARMON, G. E. H., Surgeon. Detached from the *Newark* and ordered to the *Amphitrite*.

HOLCOMB, R. C., Assistant Surgeon. The order detaching him from the Naval Academy and ordering him to the Washington Navy Yard is revoked.

LAW, H. L., Surgeon, retired. Detached from the *Wabash* and ordered home.

McMURTRIE, D., Medical Director, retired. Detached from duty as president of the medical examining board, Washington, and ordered home.

PARKER, EDWARD G., Assistant Surgeon. Appointed January 10, 1899.

PARKER, E. G., Assistant Surgeon. Ordered to the *Pensacola*.

ROSS, J. W., Surgeon, retired. Ordered to report to the War Department for duty in connection with one of the hospitals to be established at Havana, Cuba.

RUSSELL, A. C. H., Surgeon. Detached from the Bureau of Medicine and Surgery and ordered to the *Newark*.

STOKES, C. F., Passed Assistant Surgeon. Ordered to duty as a member of the board of medical examiners, New York.

SNYDER, J. J., Assistant Surgeon. Detached from the *Wabash* and ordered to temporary duty at the Naval Hospital, Newport, Rhode Island.

VON WEDEKIND, L. L., Passed Assistant Surgeon. Detached from the Naval Academy, and ordered to the Asiatic Station via the *Salace*.

Society Meetings for the Coming Week:

MONDAY, February 13th: New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private—anniversary); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, February 14th: New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical As-

sociations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, February 15th: Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, February 16th: New York Academy of Medicine; Brooklyn Surgical Society; Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, February 17th: New York Academy of Medicine (Section in Orthopedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Births, Marriages, and Deaths.

Married.

KANTZ—KEAMER.—In Berryburg, Pennsylvania, on Wednesday, February 1st, Dr. A. J. Kantz and Miss Ella Keamer.

LUTZ—STEPPE.—In Brooklyn, on Wednesday, February 1st, Dr. Stephen Henry Lutz and Miss Winnifred Steppe.

McCord—FARRINGTON.—In New York, on Wednesday, February 1st, Mr. Robert Archibald McCord and Miss Kittie Louise Farrington, daughter of Dr. Joseph O. Farrington.

Died.

CAMPBELL.—In New York, on Sunday, February 5th, Dr. William C. Campbell.

GOODENOUGH.—In Long Branch, N. J., on Wednesday, February 1st, Dr. Joseph B. Goodenough, in the seventy-third year of his age.

HENDERSON.—In Brooklyn, on Monday, February 6th, Dr. Alvin C. Henderson, in the fiftieth year of his age.

JEWETT.—In Grafton, Massachusetts, on Saturday, January 28th, Mrs. Harriet C. Jewett, wife of Dr. Frederic A. Jewett.

KANTZ.—In Berryburg, Pennsylvania, on Thursday, February 2d, Dr. A. J. Kantz, in the sixty-second year of his age.

PARKER.—In Boston, on Tuesday, January 31st, Mrs. Frances M. Parker, wife of Dr. Charles F. Parker.

PEACOCK.—In Jersey City, on Tuesday, February 7th, Dr. Rufus W. Peacock, in the seventy-third year of his age.

ROHÉ.—In New Orleans, on Tuesday, February 7th, Dr. George H. Rohé, of Baltimore, aged forty-eight years.

Obituaries.

GEORGE H. ROHÉ, M.D., OF BALTIMORE

As we go to press, the newspaper dispatches announce the sudden death of Dr. Rohé in New Orleans.

whether he had gone to attend a meeting. He was a well-known alienist and the superintendent of the Maryland State Insane Asylum. He died at the early age of forty-eight years. Dr. Rohé was an excellent writer and a highly respected member of the medical profession.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

V.

THE RIGHT TO PRACTISE MEDICINE AND SURGERY.

(Continued from page 172.)

Revocation of License.—The power to revoke as well as to grant licenses is generally conferred upon the examining board. The law conferring this power upon the board has been attacked upon the ground that it is unconstitutional, being a judicial function, and therefore only to be vested in the courts; but such objections have been universally held to be ill founded. The grounds usually designated by the statute upon which the board is empowered to revoke a certificate or license are "unprofessional, dishonorable, and immoral conduct." The careful examination of a few cases of this character will best show what conduct the courts consider as being unprofessional, dishonorable, and immoral.

Advertising.—The word "unprofessional," as used in those statutes, has been judicially defined as being synonymous with dishonorable and not referring to matters of professional ethics,* as it is considered unprofessional from an ethical point of view for a physician to advertise himself or his business; yet, if the advertisements contained no objectionable matter, such advertising would not be ground for revoking his certificate.

If, however, such advertisement contained matter which the physician knew to be false, and it was made for the purpose of deceiving and imposing upon the public, such conduct would be "unprofessional and dishonorable" in the sense contemplated by the statute. For instance, an advertisement which asserted the physician's ability to speedily cure *all* chronic nervous, blood, and skin diseases of both sexes, also *all* diseases of the eye and ear, without injurious drug or hindrance from business; *all* old, lingering constitutional diseases, where the blood is impure, causing ulcers, blotches, sore throat and mouth, pains in the head and bones, *cured for life*, etc., was held to be "unprofessional conduct of the grossest kind."†

Misrepresenting the Character of Disease. The statutes of Ontario provide that a license may be revoked for "infamous or disgraceful conduct in a professional respect." A physician represented to his colleagues in the last stages of consumption that they were suffering from catarrhal bronchitis and that he could cure them, by strength of which representation he secured money from them. The court said: "It was a disgraceful conduct

* See *State v. Wood*, 114 N. W. Rep., 470.

† *State v. State*, 114 N. W. Rep., 470.

disgraceful in the common judgment of mankind, and much more in a professional respect." Moreover, it is a very serious question whether such conduct does not amount to the crime of obtaining money under a false pretense.* This question is discussed under the head of Criminal Liability.

Concealing a Fetus.—A case of considerable interest once arose in Montana, and because of its interest it is discussed at length.

A complaint was filed with the State board of medical examiners for the purpose of revoking the defendant's license for unprofessional, dishonorable, and immoral conduct. The complaint stated in substance that the defendant placed in the furnace a package containing a headless fetus, about seven months old, with intent to destroy the same and conceal its birth; that at the coroner's inquest over the fetus the defendant testified that he had been called to attend a woman who suffered a miscarriage; that while being delivered the head of the infant became detached; that the patient from whom the fetus was taken asked not to have her name made public; he therefore refused to disclose the name, but stated that on the following day he would state the name to the coroner, who would use his discretion in the matter. That on the following day defendant refused to disclose the name of the patient, because she had left the State, and, without her presence to explain her condition at the time the fetus was taken from her, his answer would incriminate him. The defendant was tried by the board of medical examiners and found guilty and his license revoked. He appealed to the district court, and was there tried and found guilty. From that court an appeal was taken to the supreme court, which reversed the decision of the district court. Justice Harwood dissenting.

Examining the complaint carefully, it will be found that it states that defendant placed in the furnace a headless fetus, with intent to destroy the same and conceal its birth. Conceding that the evidence fully sustains this allegation, there is no unprofessional, dishonorable, or immoral conduct shown. It is well known that premature deliveries are liable to occur through accident or physical weakness of the mother, and at such times the attendance of a physician is necessary. In this case neither the complaint alleges nor the evidence shows that the miscarriage was procured by the defendant, and the law will not presume him to have been guilty of a criminal act. It is quite natural that the defendant should have become possessed of the fetus, and when so possessed of it due regard to sanitary laws required that he should destroy it. There can consequently be nothing unprofessional, dishonorable, or immoral in putting the fetus into the furnace. As to his desire to conceal its birth, such a desire, instead of being reprehensible, is quite laudable and wholly professional, for it is a doctor's duty to preserve secret all knowledge which comes to him in a professional capacity.

As to the second specification in the complaint, which charges that the defendant refused to disclose the name of the patient because she desired that it should not be made public, the question is not whether the defendant was legally justified in withholding the name, but whether he acted unprofessionally, immorally, and dishonorably in so doing. In view of the fact that he believed it to be his duty to withhold this information, until legally compelled to give it, there is much difficulty in

seeing how his conduct was unprofessional, dishonorable, or immoral.

The third charge in the complaint, which alleges that the defendant refused to disclose the name of the mother on the ground that she had left the State, and without her presence to explain her condition at the time of the miscarriage his answer would incriminate him, presents a very nice question for consideration. Were this a criminal trial such a statement could not be taken as evidence against the defendant, but, as pointed out by Justice Harwood, in his dissenting opinion, there is a broad field of human action between moral rectitude and honorable conduct and that of crime, and, while such a refusal to testify could not be used as evidence of crime, it indicates that he seeks to avoid the light of investigation, and thereby casts dishonor upon himself.

There was, however, no specific charge in the complaint of acts amounting to unprofessional, dishonorable, or immoral conduct, nor was any evidence introduced tending to show such conduct. The court was therefore of the opinion that the conduct of the defendant in refusing to give the mother's name was consistent with that of an innocent man made overcautious by fear, knowing that his actions were liable to be the subject of judicial investigation, and that in the absence of the mother he would be unable to show his innocence.*

Effect of Former Adjudication.—It is a well-settled principle of law that a trial and judgment by a tribunal having jurisdiction is a bar to further proceedings upon the facts considered in the former trial; a court would accordingly hold that the trial and acquittal of a physician by the State board of health upon the charge of "making statements and promises calculated to deceive and defraud the public" would be a bar to an investigation by the same body for making "claims and promises which are false and fraudulent," where the evidence in the two cases is identical.†

A trial and acquittal by a medical society is, however, no bar to an investigation under the statute by the State board of health for the purpose of revoking the physician's license. Nor would an acquittal upon an indictment for procuring an abortion act as a bar to a similar investigation by the board of health, the proceedings of the court and those of the medical board being entirely distinct and independent and having different objects and results in view: the one having regard to the general welfare and criminal justice of the State, and the other simply and exclusively to the respectability and character of the medical profession, and the consequences connected with or necessarily flowing from it.‡

Practice in revoking License.—The policy of the law to protect the physician from arbitrary or unjust treatment by the examining board has been considered in connection with their refusal to grant licenses; the same policy to guard against injustice is manifested in cases of revocation of license. Where the examining board revokes the license of a physician without first giving him reasonable notice of the charge against him, and the time and place of the trial thereof, the revocation will, upon appeal, be declared null and void, and the physician will be protected in continuing his practice while the appeal is pending."§

Where a physician is tried by an examining board and

* *State vs. Kellogg*, 11 Mont., 426; 36 Pac. Rep., 357.

† *People vs. McGow*, 30 Ill. App., 272.

‡ *Ex Smith*, 10 Wend., 419.

§ *State vs. Schulz*, 11 Mont., 429; 28 Pac. Rep., 643; *State vs. Weyerhorst*, 11 Mont., 431; 28 Pac. Rep., 644.

* *Ex Washington*, Q. R., 23 Ont. Rep., 299

his license revoked, and he takes an appeal from the judgment of the board, but continues to practise while the appeal is pending, and is during that time convicted of practising without a license, such conviction should be reversed if his appeal results in a reversal of the order revoking his license.*

Repeal of Statutes restricting Practice.—All statutes restricting the practice of medicine are enforced by penalties prescribed for their violation, and sometimes by provisions disabling the unqualified physician from recovering for his services. It now remains to consider the effect of a repeal of such statutes. As to the criminal feature of such acts, it is a well-settled point of law that the repeal of a law creating a criminal offense renders the law inoperative as to offenses committed before its repeal; if, therefore, a prosecution is pending for the unlawful practice of medicine, and the act making such practice unlawful is repealed, the prosecution must immediately abate. And this rule holds good even if the offender has been convicted but not yet sentenced.

The removal of the inability clause imposed to prevent the collection of fees does not as a general thing enable one to collect for services rendered while such law was in force. This question will be found more fully treated in its proper place in Article VI.

(To be continued.)

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

Meeting of November 9, 1898.

The President, DR. WALTER B. JOHNSON, in the Chair.

(Concluded from page 205.)

The Treatment of Typhoid Fever.—DR. W. L. STOWELL read a paper on this subject. (See page 185.)

Dr. MORRIS MANGES said there were some points he had raised on the subject of antiseptic treatment of typhoid fever in the discussion held two years ago at the Academy of Medicine. He had had occasion to study intestinal antisepsis with some care, and hoped he might be pardoned for repeating some of those remarks. He believed there was already a general systemic infection when physicians began to treat their cases of typhoid fever. The experimental work done by Stern and others showed that the typhoid bacillus was in the blood as early as the seventh day. Antisepsis had demonstrated that the bacilli left the intestinal wall as early as the sixth day. Physicians were usually called to cases of typhoid fever, and made their diagnosis about the fifth, sixth, or seventh day. If it was made earlier than that, there were usually other circumstances which had aided in making the diagnosis. By the end of the first week enough of the typhoid bacilli would leave the intestine and proliferate in the tissues of the body to make the attainment of intestinal antisepsis almost impossible. Even granting that one could disinfect the intestine, enough bacilli would leave it to make the patient as sick as he would be if the intestinal tract was perfectly disinfected. If one took a calomel stool and counted the

number of bacilli in it, one could see that the medicinal effect of calomel was so small that one could allege little for it. Intestinal antisepsis had been tried for certain well-known bacilli, and the stools had been carefully studied both before and after the administration of the drug; and the effect of such administration had been practically nil. Any effects obtained from intestinal antisepsis were probably due to their action upon the bacilli and their local action in checking fermentation.

In regard to the subject of hemorrhage from the bowel, if we could recognize it early enough and call in a surgeon, we might get some results from such intervention, as was shown by Ken's recent work on the subject. For the last six years the speaker said he had been waiting for an opportunity to turn over to the surgeon such a case in Mount Sinai Hospital, but he had not been able to yet. They had had deaths from perforation, but when the perforation had occurred, even with the facilities of the hospital at their command, they had not been able to make a diagnosis early enough in the cases to avail themselves of surgical intervention. If this was true of hospital practice, what hope was there in private practice? In one case of alarming hemorrhage of the bowel he had injected ice-cold water into the rectum with an almost magical effect. The patient would not tolerate surgical intervention, and the result had been gratifying. He spoke of the routine procedure of washing out the lower bowel daily in every case of typhoid fever, whether the patients were constipated or whether they had diarrhoea. If there was no tympanites, ordinary salt water would do, if there was tympanites, one could add whatever remedy seemed best. The addition of a small quantity of quinine might be of service. Another important point was the care of the mouth. Carelessness regarding the treatment of the mouth accounted for many cases of pneumonia and some of the complications that arose in typhoid fever.

Dr. BASER said that Dr. Manges had referred to the futility of attempting intestinal antisepsis after the bacillus had entered the blood, as shown by the presence of the Widal reaction. It was his impression, from reading what Widal and others had said, that the clumping showed a condition of blood deleterious to the bacillus, and that once the bacillus had entered the blood the reaction ceased. It seemed to him that Dr. Stowell had given too high value to this reaction. While it could probably be obtained at some time during the course of ninety-five per cent. of the cases of typhoid, he doubted its establishing the diagnosis in any such percentage. While he agreed with Dr. Manges as to the theoretical impossibility of any such thing as intestinal antisepsis, it had seemed to him that this line of treatment was in practice beneficial, especially as concerned the giving of small doses of calomel. Regarding baths, they had been used too much. If tubing was disagreeable to the patient, and he was excited by baths, they did harm, and sponging, the coil, etc., must be resorted to. In some cases, however, the effect of tubing was most satisfactory, the temperature was reduced to a considerable extent, and the patient fell into a pleasant slumber. With regard to the rectal douche, it certainly worked well, and seemed to ameliorate the effects of the system which the writer of the paper had spoken of.

Dr. ANDREW RICE said that typhoid fever, like many other infectious diseases, was a more trifling than a simple disease. The symptoms and their severity showed up differently in different patients; in some, respiratory symptoms predominated at the start, in others, respiratory

* State vs. Kellogg, 14 Mont. 451, 26 Pac. Rep. 1042.

symptoms; in others, nervous phenomena. We had been told that the supposedly specific bowel ulcerations, etc., might be produced by other intestinal poisons or germs than the specific typhoid-fever germ. Typhoid fever was typical and characteristic in its phenomena, but with a broad margin of variations. There were cases without high fever, and yet with a long, lingering illness. Calomel was an old remedy, and had been spoken of with enthusiasm. In regard to the giving of baths, the cases must be selected; and the element of mental and physical rest must be considered as a factor to determine whether or not they should be given. Opium and its derivatives aided in giving rest, and, judiciously used, the coal-tar products also did so. Alcohol was good for nervous-asthmatic cases. But absolute rest was above all other remedies the best. It was not uncommon to observe that those cases which had been ambulatory the longest time before coming under medical observation were among the worst in their after-course and complications.

Dr. GERRÉAS thought that the giving of baths was sometimes carried too far, or was too generally used. He thought that they should be used only in cases of absolute necessity where there was a high temperature. He spoke of the ice-cap, which would relieve the severe headache when there was a good deal of congestion, which was also beneficial in reducing temperature. In regard to the use of fruit, in his service in the hospital, when typhoid patients were convalescent their friends had brought them fruit, and he did not know of anything that caused rise of temperature so frequently as oranges, when the patient was principally on a milk diet. He did not think that intestinal antiseptics could have any influence on the germs of the disease, but he thought that salol, beta-naphthol, and some other remedies were of great service because, by preventing fermentation in the intestine, they lessened the distress and the tympanites. In regard to a mouth wash, he could speak with a great deal of feeling on this subject, because he had just recovered from typhoid, and had suffered from a very sore mouth. He had found that borolyptol was most grateful and efficacious. He thought the antipyretics were of great value. In his own case phenacetine had worked like a charm, and five grains had reduced his temperature two degrees without having caused any apparent depression. The coal-tar preparations were also of great value in the intense headaches that sometimes occurred in the beginning of the disease.

Dr. W. L. CARR said that the quotations in the paper were very valuable, because they were taken from a writer of whose opinion very much had been thought. The same author made the statement that we must remember that typhoid fever would vary in different epidemics, also that we did not abort the disease, and that we must be rational in our treatment. The speaker thought these considerations were of service, and said they had been verified in his experience. He thought in the treatment they should have consideration for the patient, and not treat the case as a specific typhoid fever. In regard to intestinal antiseptic management, he thought there must be a basis of truth in the use of all the methods that had been carried out and elaborated. He thought the intestinal antiseptic treatment was not always valuable so far as the poison of the typhoid fever was concerned. The toxic condition in typhoid was often beyond control, but there was in the intestine a dimidated, i.e., local action, and under those conditions the intestine was liable to all sort of dangers,

and food which might be very suitable if the intestine was capable of absorbing it, was rather an irritative than a nutritive element. By giving some antiseptics, such as calomel, one might stimulate the liver and intestine, and get some valuable results other than those due to the control of the typhoid poison. In the same way, frequently, rectal enemata were of value, because they cleared out material that would lead to putrefaction, and the patient would be much more comfortable, and assisted in convalescence. In treating the disease he thought one should consider the condition of the kidneys, the heart, and other organs that might be affected either by the poison of the fever or associated poisons. The methods of feeding were of the most importance, and he thought no one could get good results in a typhoid fever case who merely gave medicine. In regard to the use of the coal-tar products, while he would not advocate their being used for any length of time, he did not hesitate to say that they might be valuable and of extreme service in their proper place.

Dr. STOWELL said he had used the combination of these tablets extensively in all manner of intestinal disorders, and he had not observed any marked effect on the typhoid fever. The statistics in favor of tubbing showed that the mortality, which had been from fifteen to twenty-five per cent., had been reduced to two and three per cent.; and certainly it would seem that we were not doing our duty if we did not give our patients the benefit of the tubbing, and yet he doubted if half the physicians present insisted on tubbing for their patients. He stated that it was of very great importance that we should instruct the nurses and the family, and all those who were about the sick, in the exact nature of the disease, and see that no opportunity was allowed for it to spread; that prophylaxis should be applied to the family of the patient we were treating, rather than by getting up a set of rules for the well people.

Book Notices.

Operative Gynecology. By HOWARD A. KELLY, A. B., M. D., Fellow of the American Gynecological Society, Professor of Gynecology and Obstetrics in the Johns Hopkins University, etc. With Twenty-four Plates and Five Hundred and Ninety Original Illustrations. Volume II. New York: D. Appleton and Company, 1898. Pp. xiii-551.

THIS volume is uniform with Volume I in those excellences which we took occasion to commend in the consideration of that volume. In clearness of expression, as to the text, and in beauty and lucidity, as to the pictorial portion, this work leaves little to be desired. The author might have included in his book the subjects of operations upon the mammary gland and upon the gall bladder, two subjects with which gynecologists have had much to do. Certainly they are as much in keeping with his theme in general as hernia and the lesions of the intestine which require surgical treatment.

In this connection the recent remark of Mr. Annandale becomes pertinent: "The distinction between the gynecologist and the surgeon no longer exists."

It is doubtful whether any American will ever publish a more attractive work on gynecology. It is difficult

to see how one more attractive, from all points of view, could be published. The only recent work with which it might be compared is that of Pozzi (we refer to the original work), and Pozzi was not so fortunate in the get-up of his book as Kelly has been.

Traité de médecine et de thérapeutique. Publié sous la direction de MM. P. BROUARDEL, doyen de la Faculté de médecine de Paris, etc., et A. GILBERT, professeur agrégé à la Faculté de médecine de Paris, etc. Tome cinquième. Paris: J.-B. Baillière et fils, 1898. Pp. 995.

The first chapter in this volume, by E. Dupré, is entitled Diseases of the Salivary Glands. About one half of it, however, consists of a general introduction to the study of the diseases of the glandular system. It also gives a general classification of gland infections which is followed more or less closely by the other contributors to the volume.

The chapter on diseases of the pancreas is contributed by Richiardi and Carnot. They regard hemorrhages of the pancreas, excepting, of course, those immediately following trauma, as a peracute form of inflammation, and give an interesting *résumé* of clinical and experimental research into its aetiology.

The section on diseases of the liver was written by Gilbert with the collaboration of Fournier in the chapters treating of symptomatology and diseases of the bile passages and blood-vessels, of Garnier in the chapter on disease of the perihepatic peritoneum, and of Surmont in the chapters on diseases of the liver tissue proper. Although every page of this section shows the changes which in the past few years have revolutionized the views regarding the aetiology of these diseases, the attention of the general reader will probably be arrested most forcibly by the interesting discussion of the pathogenesis of angiocholecystitis and the significance of this condition in the causation of biliary lithiasis and hypertrophic biliary cirrhosis. The classification of cirrhoses adopted by the authors is rather complex and of more scientific than clinical value. It is to be regretted that instead of adhering constantly to the scientific names of morbid conditions they employ so frequently "proprietary" names. "Laennec's disease" is sanctioned by long usage, but why should we be burdened by Hanot's disease and Banti's disease? And as for "Bilharziosis," according to Jean-clème. . . . Some effective method of repressing this form of scientific (?) adulation is urgently desirable.

A short chapter by Lannois treats of the diseases of the spleen.

Abnormalities of the urine are described in a series of chapters by Jean-clème. In the chapter on uræmia, by Chautard, which serves as an introduction to the section on diseases of the kidney, by the same author, there is a good review of the theories regarding its aetiology. Although the adoption of any one of these theories is regarded as premature, the author insists on the theoretical and practical value of "lavage of the blood" in the treatment of the condition. The classification of renal diseases is simple and clinically useful, and the chapter devoted to their consideration constitutes the most valuable portion of the volume.

Common outlines in two brief chapters, the "renal" disorders of the bladder and of the male sexual apparatus.

The diseases of the female genital organs are dis-

cussed by Siredey with reference chiefly to aetiological considerations and their relation to the subject of general medicine.

The volume is distinguished by the same admirable features which have been noted in previous volumes of this work: distinctness of clinical pictures, broad and rational outlines of treatment, and thorough and judicious criticisms of recent advances in medical research. If the views expressed seem at times to be without sufficient warrant, they merit, on account of the authority of their sponsors, respectful consideration. It is a pity that the usefulness of the work should be limited by a very meagre index.

Acromegaly. An Essay to which was awarded the Boylston Prize of Harvard University for the Year 1898. By GRAY HINS-DALE, A. M., M. D., Fellow of the College of Physicians of Philadelphia and of the American Academy of Medicine, etc. Detroit: William M. Warren, 1898. Pp. 88. [Price, \$1.50.]

This essay, like the author's previous one on *Syringomyelia*, published in 1897, is a summary of the facts known and the views held in regard to the rare disease of which it treats. It shows much industry in literary research and a personal familiarity with the subject. The bibliography is the most complete hitherto published.

The illustrations are varied and well chosen and the subject-matter is lucidly stated. Altogether, the monograph will be indispensable to neurologists. If we had any objection to offer concerning it, it would be this: that the author has not sufficiently availed himself of his opportunities of critical analysis; that, to paraphrase a saying of Buckle's, "he has added facts to the subject of acromegaly without enlarging its philosophy."

The Sexual Instinct: its Uses and Dangers as affecting Heredity and Morals. By JAMES FOSTER SCOTT, B. A. (Yale University), M. D., C. M. (Edinburgh University), Late Obstetrician to Columbia Hospital for Women and Lying-in Asylum, Washington, D. C., etc. New York: E. B. Treat & Co., 1898. Pp. 5 to 436. [Price, \$2.]

There are probably few subjects more deserving of frank scientific discussion than the facts and obligations of sexual life. These topics are boldly but clearly discussed by the author for the benefit of lay readers, particularly of adult men, among whom it is to be hoped the book will have a circulation proportionate to its merit and importance.

Diseases of Women: A Manual of Gynecology designed especially for the Use of Students and General Practitioners. By F. H. DAVIS, M. D., Assistant Professor in Gynecology, Harvard Medical School, etc. Third Edition, revised and enlarged. With One Hundred and Fifty Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1898. Pp. xvi + 475 to 394.

AMID the plethora of works on gynecology, with which the profession has been supplied of late in various ways, this work, modest and unpretentious as it may appear, finds a place. It is often convenient for the student to make one's statements in such a form as to be read by those who read them not only for a medical but for a popular purpose, and this the present treatise does admirably well. From the first

page to the last there is not a statement of which the interpretation need be doubtful in the least to one who has ordinary intelligence.

Dr. Davenport has not attempted too much, and here again he has shown the excellence of his judgment; he has not attempted to inform students and practitioners on matters for which they will have little use. He might even have left out the chapter on ovariectomy, and one or two others which appeal especially to the experienced gynaecologist, with no great detriment to his book; but we suppose he may have regarded matters of such importance historically as indispensable in any book which contained any record whatsoever of the gynaecological art.

BOOKS, ETC., RECEIVED.

The Retrospect of Medicine. A Half-yearly Journal containing a Retrospective View of Every Discovery and Practical Improvement in the Medical Sciences. Edited by James Braithwaite, M. D. Lond., Obstetric Physician and Surgeon to the Leeds General Infirmary, etc., assisted by E. F. Trevelyan, M. D. Lond., B. Sc., M. R. C. P., Assistant Physician to the Leeds General Infirmary, etc. Volume CXVIII. July-December, 1898. Issued January, 1899. London: Simpkin, Marshall, Hamilton, Kent, & Co. Pp. xxvi-443.

L'Exercice de la médecine et le charlatanisme. Par P. Brouardel, Professeur de médecine légale et doyen de la Faculté de médecine de l'Université de Paris, etc. Paris: J.-B. Baillière et fils, 1899. Pp. viii-560. [Prix, 12 fr.]

Second Annual Report of the Loomis Sanitarium for Consumptives. Liberty, Shawangunk Mountains, Sullivan County, N. Y., and Branch Hospital and Dispensary for Incurables, New York City. 1897-1898.

Some Statistics upon Serotherapy in Tuberculosis. By J. Edward Stubbert, M. D., of Liberty, N. Y. [Reprinted from the *American Climatological Association*.]

The Therapeutics of Benzozol. By George F. Butler, M. D., of Chicago. [Reprinted from the *American Therapist*.]

The Relation of Diseases of the Female Generative Organs to Nervous and Mental Affections. By B. Sherwood-Dunn, M. D., of Boston.

The Treatment of Atonic Fatigue and Strain of the Vocal Organs by Local Applications of Cold Water and Massage of the Larynx. By Dr. C. A. Wilson-Prévost, Late Externe of the Hospitals, and of the Laryngological Clinic of the Faculty of Medicine of Paris, etc.

Tuberculosis of the Bladder. Etiology and Pathology. By W. M. L. Coplin, M. D., of Philadelphia. [Reprinted from the *Journal of Cutaneous and Genito-urinary Diseases*.]

Cases in Hospital Practice. Ligation of the Gastro-celiac Artery—Disturbances of the Thyroid Gland complicating Fibroid Tumors of the Uterus. By George S. Kreider, M. D., of Springfield, Illinois. [Reprinted from the *Journal of the American Medical Association*.]

Syphilis among British Troops. Portugal, 1812—India, 1896. By George O'Grady, B. Sc., M. B. Edin., etc. [Reprinted from the *British Journal of Dermatology*.]

The Graver Nerve Disturbances due to Organic Change in the Genital Organs. By William H. Hunnisson, M. D., of Cleveland.

A Case of Landry's Paralysis. Autopsy; Pathological Report; Life Prolonged by Artificial Means for

Forty-one Days after the Establishment of Respiratory Paralysis. By Charles L. Greene, M. D., of St. Paul. [Reprinted from the *Philadelphia Medical Journal*.]

New Inventions, etc.

ANOTHER ADENOID FORCEPS.

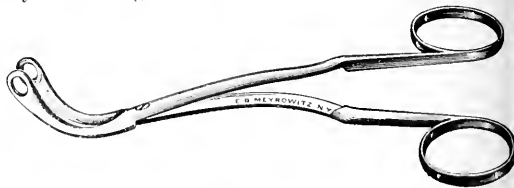
By J. H. WOODWARD, M. D.,

SURGEON TO THE METROPOLITAN THROAT HOSPITAL AND TO THE NEW YORK NOSE AND THROAT HOSPITAL.

EVERY operator of experience agrees that not every case of adenoid vegetation should be managed by the same method. No one supposes that the same instrument is suited to every case. The instrument to which I wish to direct attention, however, will meet the requirements of the majority of cases, I think; and it possesses intrinsic merits of sufficient importance to justify the publication of a description of it.

My first adenoid operation was done years ago with a Jarvis snare. Since then I have operated, as a rule, with some sort of forceps, of which I have tried a variety of models. That which, until comparatively recently, has pleased me most is a small instrument made after the Loewenberg pattern. With that forceps, however, I have been obliged sometimes to strip up the mucous membrane of the pharynx in a most unsurgical manner. It was for the purpose of obviating the necessity of such unsurgical manifestations that I attempted to improve the instrument by giving it a cutting edge and fenestrated blades. With the modified instrument I am able to remove pathological structures from both small and large throats without injuring the normal tissues.

Other cutting forceps for the removal of adenoid vegetations have been in the market during a number of years; but it seems to me that all of them have marked defects. I have undertaken to profit by these mistakes while designing the little instrument which was made for me nearly a year ago by Mr. E. B. Meyrowitz of this city, and of which I am able to present a very fair drawing.



The total length of the forceps is about nine inches. A line drawn from the tip to the joint may be regarded as a chord of the beak's arc (not a segment of a true circle) having a length of an inch and eleven sixteenths. The drop of the handle below a horizontal plane passing through the joint is seven eighths of an inch. These dimensions give an instrument of sufficient length and of suitable form for every case in a person under fifteen years of age.

The blades are fenestrated in the beak. Each fenestra is oval and measures three sixteenths by five sixteenths of an inch. The beak of the right blade passes within the edge of the left blade. The edge of the latter projects inward a sixteenth of an inch from the general surface, so that by virtue of the overlapping of the left blade and the close approximation of the edges of both

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BY SIDNEY V. HAAS, M. D.

It consists of a glass vessel with pouring lip, shaped like a graduate, holding sixteen ounces. The outer surface is divided by vertical lines into seven panels; one panel shows the ordinary ounce graduation; the six others show six different formulae, so arranged as to be suitable for the entire first year's feeding. The following is a more or less accurate reproduction of the arrangement of these panels:

It is possible to obtain other percentages than those shown on the page 4, by mixing what is called for by two adjacent formula, as, for instance, equal quantities

child's growth, accompany the apparatus, which is simple, accurate, and economical, making properly modified milk of practical value obtainable in places where it has hitherto been impossible to get it. The manufacturers of the apparatus are the Surgical and Chemical Supply Company, 147 Centre Street, New York.



Miscellaneous

The Effects of the Habitual Use of Alcohol. According to the *Diabetic and Hygienic Gazette* for January, Dr. Crothers, of Hartford, Connecticut, in a paper read at the New York County Medical Association, October 17, 1898, discussed this subject in a very conservative and intelligent way. He stated among other things that the ingestion of alcohol accelerates the rate of circulation ten or fifteen beats a minute at first, but that after a while the circulation became slower, so that it was actually dropped at least as much as the normal rate, and fell below the normal. As time passed, however, it was gradually considered unprofitable by the organism. The conclusion of the case of his was that alcohol lowered the increase in the pulse rate, and that it was under the influence of alcohol that the pulse rate was lowered. Hallucination, of hearing voices, was also noted.

circumstances. The senses of taste and smell were also influenced by alcohol. The sense of touch was always exaggerated or diminished, and careful measurements of muscular force showed that the muscular system did not escape the deleterious action of this poison. If the temperate man suffered from the use of one or two ounces of alcohol in this appreciable way, then the continual or frequent drinking of alcohol must exert a distinctly deleterious influence. All experimenters agreed that when alcohol was taken in excess the result was a profound tissue and cell degeneration and general starvation of the tissues. Alcohol, by its anæsthetic action, soothed the irritable nerve centres, and the effects were so pleasing that the individual desired to repeat the experience. Often this desire to seek relief by its anæsthetic effect was really an indication of a diseased condition, which perhaps was disclosed only by a post-mortem examination. A century ago the anæsthetic action of alcohol created dementia and idiocy, but to-day it was more apt to cause delirium and paralysis. Heredity seemed to be one of the most prominent causes of inebriety.

The Treatment of Malignant Pustule.—Dr. Castroverde (*Revista de Medicina y Cirugía prácticas*, December 15th) thus sums up his paper on this subject: 1. That the cauterization should be marginal if it is not to occasion much destruction and suffering, as it was practised by the oldtime surgeons. 2. The integrity of the escharotic crust must be preserved, using on it a protective cover to avoid contact with the infectious germs in the air. 3. Bichloride of mercury internally has given excellent results, as have also hypodermic injections of carbolic acid in two-per-cent. solution made twice or thrice daily in the thickness of the oedematous zone and repeated until the oedema has disappeared. The scar is removed by means of permanent irrigation of the pustule with carbolic acid, bichloride or bichromate solutions at a somewhat elevated temperature. By these means perfect antiseptics is maintained.

Indications for Operation in Adenoid Disease of the Nasopharynx.—Dr. James B. Ball (*Clinical Journal*, December 28th) concludes his paper as follows:

"Before laying down some general rules which guide one in advising operation or otherwise in adenoid cases, I may say that not only the cases but the circumstances vary so much that no rules can cover every case. Thus with some patients there is such an excessive desire to avoid an operation, even at some risk, that this may naturally turn the scale in a doubtful case, and then you come across others who seem to be curiously keen to have their children operated on. Sometimes this is due to the exaggerated ideas that have got about on the serious effects of adenoids; but whatever it is due to, it may, of course, influence a decision in an otherwise doubtful case. Then you have a case put this way: How is such and such a symptom to be got rid of? You may think the symptom trivial, and one that will pass off, but the patient will not wait, and beg for an operation. These and other circumstances step in sometimes to influence our decision.

"I will now conclude by enumerating several symptoms and conditions, any one of which by itself may, in my opinion, constitute an indication for operation. Of course, a combination of two or more affords a still stronger indication.

"If there is habitual mouth breathing in a child, which has been going on for a considerable period and

shows no sign of improvement, I should operate. I should include also those children, especially young children, who, though not habitual mouth-breathers in the day, have noisy labored breathing or suffocative attacks at night. In such a case the appearance of a falling in of the lower part of the chest in a young child would considerably strengthen the indication.

"If the child is deaf, or subject to attacks of deafness or earache, or has a chronic otorrhoea, I should recommend operation in all cases, and with a good prospect of cure; but in older children and young adults with long-standing deafness, though I still think we should operate, our prognosis must be guarded.

"Repeated attacks of bronchitis constitute an important indication; so does the presence of asthmatic symptoms. Distinct benefit may fairly be expected in these cases. A constant, persistent cough without bronchial symptoms, not yielding to ordinary treatment, is often cured by removal of adenoids.

"Repeated colds in the head of a severe and prolonged character, or a chronic nasal catarrh, or purulent rhinitis not yielding to simple treatment, may be an indication for operation. Paroxysmal sneezing and hay-fever symptoms are also indications for removal of adenoids.

"There are finally a few maladies, such as nocturnal enuresis, chorea, and epilepsy, where the operation may sometimes be done, although none of the foregoing indications are present, rather with a view to remove all possible sources of reflex irritation than with any distinct promise of direct benefit to the malady in question."

Sanitation under Difficulties.—The *Lancet* for December 31st relates the following story of the difficulties encountered by an English surgeon in dealing with the plague in an Oriental country:

"*Plague in Malegaon.*—One of the most interesting pictures of work in a plague-stricken community appears in a place which at first sight would seem most unlikely for this kind of literature—namely, the pages of a public-school magazine—*The Wykehamist* for December 20th: 'Year by year,' says Kipling, 'England sends out fresh drafts for the first fighting line which is officially called the Indian Civil Service. These die or kill themselves by overwork, or are worried to death or broken in health and hope, in order that the land may be protected from death and sickness, famine and war, and may eventually become capable of standing alone. It will never stand alone, but the idea is a pretty one and men are willing to die for it.' The article referred to is written by one of this fighting line in question, an old Wykehamist, and is a plain, unvarnished record of hard work. The population of Malegaon is mainly composed of Mussulman weavers who wander over the countryside selling their work, and it was by the agency of one of their customers from Bombay who eluded the cordon of guards that plague was introduced. The old Wykehamist set to work with the help of one native doctor who, we are sorry to say, was a venal person. A few days after the outbreak he appeared in a new suit of shiny black broadcloth, which was considered suspicious. Suspicion soon crystallized into certainty when he was caught letting off the family of a rich man from going to hospital, although there was a case of plague. In a week the native doctor was dead. There was no hospital, so they had to convert a rest house situated in the Mussulman cemetery into one, a place which, as the old Wykehamist says with grim humor, was 'very handy,

for the cases usually die in under five days.' Eventually he got an English surgeon to help him who had a rather bad time for the first few weeks, for he was imbued with modern ideas as to stethoscopes and thermometers, which naturally appalled the intensely conservative Oriental mind. However, this wore off, and when the epidemic was over he was *fitted* by the very people who had previously looted his house, and this, too, after having been smitten by the plague himself. The old Wykehamist was obviously endued with the dogged British pluck which a public-school education affords a man. 'I dug up lots of bodies when concealed plague was suspected. Sometimes a body would be left unclaimed in a house and I had to shoulder it and bring it out myself. One day I built a very fine funeral pyre myself and roasted a gentleman.' The *Lancet* adds: "Winchester may well be proud of her son; and the editor of *The Wykehamist* is to be congratulated upon his magazine, for it is certainly superior to the usual run of school journals."

The Value of Thyroid Medication in Fibroma of the Uterus.—Dr. William M. Polk (*Medical News*, January 14th), as the result of a consideration of ten cases of fibroma treated with thyroid remedies, remarks that the net result in each case (Case VII excepted) has been improvement, the greatest occurring in those who have taken the treatment longest. Its manifestations were: (a) Control of the menstrual flow; (b) arrest of the growth and, in some cases, diminution of the size of the tumor and apparently softening of it; (c) disappearance of pain and diminution of tenderness in the growth, and also of the sense of abdominal and pelvic distention; increase of muscular and nervous energy; (d) betterment of general nutrition, manifested at first by slight loss and then by return of flesh; improved state of the skin, hair, and nails, and in the substitution of a good color for the appearance of anemia. As might be inferred, the condition of the bowels was likewise improved, although this was counterbalanced in some cases by gastric disturbances. This was not, however, the sole drawback. There were others, but none was insurmountable—all belonged to the state now designated "thyroidism," but were manifested in its milder form because of the close watch kept upon the remedy. In every instance tachycardia was the most common drawback; next, restlessness and sleeplessness, when the drug was taken at bedtime; and, lastly, indigestion.

It is evident then, he says, that the remedy is efficacious, but when conceded a place, it must be compared with those accepted and now in use. To this end, therefore, he submits the following observations: Ergot, with or without digitalis, has failed to arrest menorrhagia in about fifty per cent. of his cases, and when successful it has been continued, as a rule, in the face of an impairment of digestion and bowel action, interference with the heart's action, and sometimes its use has been accompanied by a good deal of mental depression. Even though retarding growth for a time, it loses this action after a while. It aids in the expulsion of submucous fibroids and the conversion of interstitial into subperitoneal and submucous growths. The general health is apt to deteriorate much in the prolonged use of this drug. The suspension of the ergot has been followed usually by relapse into a state about as unfavorable as when it was commenced. Electricity has given little satisfaction, except when used as a caustic to the mucous membrane of the uterus, and this action has appeared to be

in no way superior to the use of the curette, and is more dangerous. Curettage involves anesthesia and invasion of the uterine cavity not once, but repeatedly in all cases. Ligation of the uterine arteries is an operation *sub judice*, his experience being against rather than in its favor. Removal of the ovaries is an operation which offers, perhaps, a better result than mere ligation of the uterine arteries, but it is an open question with many having a patient fitted for a laparotomy if total extirpation is not better. Myomectomy, either submucous or subperitoneal, and total extirpation are procedures which stand by themselves, facing no rivals in their appropriate fields, so no comparison with any medicinal or hygienic treatment can be instituted with them.

This, therefore, reduces the competitors of the thyroid treatment to the purely medicinal—such as ergot and digitalis—to electricity, and what may be called the palliative operations, such as curettage, ligation of the uterine arteries, and oophorectomy. He recognizes that it is premature to institute a comparison between this thyroid treatment and the so-called palliatives, yet he has ventured upon it for the sole reason that his individual experience has seemed to justify it. If, therefore, the thyroid treatment can be shown to possess the power to keep down the menorrhagia, metrorrhagia, and hydrorrhoea of fibroids; if it can control their growth and annul the pain inherent to many of them, it is superior to any medicinal treatment now in vogue; is better than electricity, curettage, or ligation of the uterine arteries; is preferable to oophorectomy, and in all smaller tumors it should be carefully employed before myomectomy or total ablation is resorted to, excepting, of course, cases in which the growth is merely submucous or in which malignant or septic changes are suspected. All such cases, in common with the larger growths, come within the pale of myomectomy or total ablation and, as already admitted, are outside the field of this comparison.

Blood Enemata in Tuberculosis.—Dr. Whittaker (*Practitioner*; *Canada Lancet*, January) has found marked increase in weight and gain in nutrition to follow the repeated use of blood enemata in tuberculosis. To each quart of blood he adds half an ounce of bicarbonate of sodium and sugar of milk and one grain of common salt. Two pints of a mixture consisting of equal parts of water and such blood are thrown high up in the rectum. Bullock's blood was at one time, the *Practitioner* believes, a favorite remedy in Paris, where patients used to visit the abattoirs in order to get it freshly drawn.

Enucleation of the Ovaries.—Dr. J. Coplin Stinson (*Canada Lancet*, January) concludes a paper on "The Removal of Diseased Ovaries, Tubes, etc., by Enucleation, with Ligation of Vessels only; Forceps as Temporary Hemostatics, Levers, and Tractors, an Addition to the Enucleation Method, as follows:

"From a study of many cases treated by the several methods of operation, I can only draw the following conclusions:

"1. That an irreparably diseased ovary, etc., should be removed by enucleation, with ligation of vessels only; using only absorbable ligatures.

"2. That enucleation is the safest, most scientific and a thetic method of removing an ovarian cyst, tumor, etc., of the ovary, tube, the uterus, etc. There is no danger of hemorrhage, if a vessel is severed; it can be easily and quickly secured by the use of the

"3. That the ligation of vessels only does away with the tying off in sections, the tying and transfixing of pedicles, mass, non-absorbable, dead, and wandering ligatures, sloughing and painful stumps, pelvic exudates, adhesions, and the cautery, etc.

"4. That, as no untoward symptoms follow the enucleation method, there is no secondary operation necessary.

"5. That with enucleation there is little or no danger of injuring adjacent viscera; recovery is rapid, and the danger of sepsis is reduced to the minimum.

"6. That when a Falloppian tube is removed, it should be completely; no stumps should be left. When the serosa of the tube at the tubo-uterine junction is not totally destroyed, it should be divided in a circle about a quarter of an inch from the uterine cornu, dissected back to the uterus, and, after the removal of the tube, the cut edges united by a continuous fine catgut suture.

"7. That in removing an appendage, etc., by enucleation the cut edges of the broad ligament should be united by a continuous absorbable suture.

"8. That even when both appendages are removed, a uterus that is in good position, and not irreparably diseased, should not be removed.

"9. That it must not be forgotten that at times enucleation is difficult. Under such circumstances the surgeon should first separate the adhesions, then enucleate the mass so as to expose the pedicle, which is clamped with long forceps, and then cut across between the mass to be removed and the clamps. The forceps are used as temporary hemostatic clamps, levers, and tractors, while the vessels are ligated separately with fine catgut, and are thus an addition to the enucleation method."

The Three Ages of the Physician.—Dr. N. W. Leighton (*Indian Lancet*, December 16th) says that it is reported of Sir Andrew Clark that he told his pupils that he spent the first twelve years of practice in earning his bread, his second twelve years in earning his bread and butter, and not until the third twelve years could he indulge in luxuries.

Cystitis due to the Typhoid Bacillus.—Dr. Thomas Houston (*British Medical Journal*, February 14th) records a case of cystitis of three years' duration due to the typhoid bacillus, which he considers worthy of record for the following reasons:

"1. The history gives no evidence that the patient ever had typhoid fever, and the fact that she spent so much of her time in hospital and was under medical treatment at home may be held to exclude any possibility of mistake in this respect. In cases of typhoid fever the bacillus of Eberth is often found in the urine, even some weeks after the temperature is normal. This case is one of typhoid infection without the usual symptoms of typhoid fever, and, since there is no point in the history subsequent to the commencement of the cystitis three years ago which suggests the occurrence of a new infection, the probability is that the typhoid bacillus has been present from the beginning. When we consider the fact that typhoid bacilli are so easily destroyed by more vigorous forms, such as Escherich's bacillus, it seems highly improbable that at any time during the course of the cystitis the typhoid bacillus has displaced the colon bacillus in the bladder. The acidity of the urine exclude the probability of other forms commonly found in cystitis ever having been present.

"2. The blood serum gave a decided 'reaction of

infection.' This shows that the case is not a simple bacteriuria, but that the bacillus has a nidus somewhere, as, for example, in the mucous membrane of the bladder, and thereby has such an effect on the blood and tissues as to cause the serum to acquire the agglutinating power.

"3. It seems to follow that in this case the bacillus of Eberth was capable of producing a local lesion without the patient suffering from typhoid fever.

"4. The fact that the bacillus can grow in the tissues without any symptoms of typhoid fever resulting, and produce there a local lesion, is in favor of the view that this fever is a true general infection, and not one of merely local origin, in the Peyer's patches of the intestine.

"5. It also proves that the bacillus may occur in the tissues, and the blood serum give Widal's reaction, without the infection which we recognize as typhoid fever resulting.

"6. To explain the anomalous fact that we have here a lesion, restricted apparently to the urinary organs, produced by the typhoid bacillus, which has persisted for a very considerable time without any symptoms of typhoid fever, three theories seem admissible:

"(a) This patient for some reason or other was not very susceptible to infection with Eberth's bacillus, so that when the opportunity for infection occurred a local lesion alone resulted, and no general infection. This agrees with the result obtained when a non-susceptible animal is inoculated with a given bacillus.

"(b) We have here a form of typhoid bacillus which differs in its infectious power from the recognized form of Eberth's bacillus.

"(c) Typhoid fever is not solely due to the bacillus of Eberth, but other aetiological factors must be brought to bear on the patient before the clinical features of typhoid septicaemia result. The researches of Sanarelli, which show how the virulence of the typhoid bacillus is increased by the injections of the toxine of the *Bacillus coli communis*, and also those of Sidney Martin, which confirm his results, make it certain that the *Bacillus coli communis* may be directly concerned in producing a virulent typhoid infection in animals. In the recent report on the Belfast water supply, Dr. Lorrain Smith has shown that the *Bacillus coli communis* had a distinct relation to the aetiology of the recent epidemic of typhoid fever in Belfast (1898), and that many of the cases gave evidence of the existence of a mixed infection of the bacillus of Eberth and that of Escherich.

"The persistence," says the author, "of the typhoid bacillus in the bladder possibly for three years appears less remarkable when we recall the cases in which abscesses containing typhoid bacilli have been observed six or seven years after the occurrence of typhoid fever in the patient."

A New Chicago Journal.—We have received the first number of the *Western Clinical Recorder*, a bi-monthly of seventy large octavo pages, edited by Dr. Fred Jenner Hodges and Dr. William T. Rinehart. It makes a very creditable appearance.

A New French Journal of General Medicine.—We have received the first number of the *Archives provinciales de médecine*, dated January, 1899. It is a monthly of eighty octavo pages, published in Paris and edited by the indefatigable Dr. Marcel Bandonin. It gives promise of being an important addition to periodical literature.

A New Bucharest Semi-monthly, entitled *Clinica*, has appeared. The first issue, a double number for January 1 and 15, 1899, consists of sixteen triple-columned quarto pages, two of which are devoted to advertisements. It is edited under the direction of Professor Assaky.

The Journal of Tropical Medicine.—This is a new monthly journal which has reached its sixth number, dated January, 1899. The number contains sixty-eight large double-columned pages of reading matter. The *Journal* is edited by James Cantlie, M. B., F. R. C. S., and W. J. Simpson, M. D., M. R. C. P., and published in London.

The Food Value of Mushrooms.—At a recent meeting of the New York Mycological Club Mr. E. H. Gane, a pharmaceutical chemist, read a paper on the use of vegetable fungi as food. He contended that their nutritive value had been much overrated. A great deal had been said, he remarked, concerning the immense amount of valuable food which was daily going to waste in the shape of edible fungi. We had been told that in many parts of the world these vegetables formed the staple article of diet of the inhabitants. Chemists had assured us that mushrooms belonged to the animal rather than the vegetable kingdom, seeing that they possessed a larger percentage of nitrogen than any other class of vegetable life. They were, we were told, essentially "protein" in composition, as much so, pound for pound, as butcher's meat. Two German chemists, Rollmann and Ziegel, had stated, some years ago, as the result of chemical investigation, that mushrooms deserved to be ranked with meat as sources of nitrogenous nutriment. One man in Thuringia was said by Dr. Gautier to have lived upon nothing but mushrooms for thirty years and to have died a centenarian. Comparisons had even been made between mushrooms and other articles of food to the detriment of the latter. Thus, chemical analysis had shown mushrooms to contain from twenty to thirty-five per cent. of "protein," while bread contained only eight per cent., oatmeal ten per cent., potatoes five per cent., and barley meal six per cent. of "protein."

The poorer classes had been urged to substitute vegetable fungi for meat on the ground of their superior nutritive value and cheapness, and farmers had been told that they were neglecting their opportunities in not providing us with more "vegetable beefsteaks." The Department of Agriculture had taken up the subject, incited thereto by publications of the various mycological clubs, and had issued bulletins showing how to cultivate mushrooms advantageously, and how to distinguish the edible from the poisonous varieties.

In spite of all these efforts, the use of the so-called "vegetable beefsteaks" had not made the progress which enthusiasts could have wished, and some doubting Thomases had even cast eyes of distrust on the results of various workers in this field.

As long ago as 1821 a Dr. Kitchener stated in an English publication called *Cook's Oracle* that he did not believe that mushrooms were nutritious. Dr. Joubert in Pereira, in his *Treatise on Food and Diet*, published in 1843, said: "Mushrooms are difficult of digestion, and on certain constitutions act injuriously. Invalids, the peopled, and those with delicate stomachs, will not profit in avoiding the use of this doubtful order of foods." Other writers had expressed similar opinions, not, however, based on experimental work. Dr. Stro-

mer, of Vienna, in 1887, came to the following conclusions as the result of a few experiments:

1. That mushrooms are of small nutritive value, being heavily charged with water, which reduces the amount of nutrient substances.

2. The albumin they contain is difficult of digestion.

3. They are useful as ordinary vegetables, and, being cheap, deserve the attention of the poor.

Mycological enthusiasts had refused to accept these conclusions, and pointed with triumph to the results of chemical analyses, which showed a high carbon and nitrogen value in mushrooms of nearly all varieties. Chemical analyses, they said, could not lie, and no one had ventured to dispute the results obtained.

It was only recently that we had found out that in physiological matters chemical analyses could be found to give results far from the truth. An almost exactly parallel example was found in what had been termed the "brown-bread delusion." A recent writer said:

"For centuries man has wanted white bread for his daily diet. His self-styled 'betterers' have assured him that his daily brown or black loaf, whether of rye, oat, barley, peas, or whole wheat, was much more wholesome."

"About thirty years ago, that 'dangerous thing,' a 'little knowledge' of chemistry, demonstrated beyond all possibility of doubt the superiority of brown bread over white. Chemical analysis, the new infallible Pope of science, revealed that brown bread was far richer in nitrogen than white bread was, and nitrogen was considered the greatest desideratum of all food-stuffs."

"For some reason or other, however, every family, every class, every nation kept discarding brown or black bread and substituting white as fast as they could afford it. The brown loaf still lingers on the board, but rather after the manner of the mummy at the Egyptian feast, a tribute to a vanished ideal rather than an article of food."

Science had again come to our aid and had now proved that, although more nitrogen was present in brown bread, less of it actually got into the blood than from a similar weight of white bread; that white bread was not only more digestible, but more nutritious, weight for weight, than brown. The boasted excess of proteid matter was found to exist chiefly in the husk, or skin, of the wheat berry. This skin in composition was closely allied to woody fibre, and was absolutely insoluble in the intestinal fluids.

An exactly similar condition of affairs was found in studying the food value of vegetable fungi. It was true that the percentage of nitrogenous and carbohydrate matter in the solid constituents of mushrooms was higher than in bread, potatoes, or other vegetables, but, as Dr. Lander Brunton had said, if nitrogen were all we required, regardless of its form, we could grow fat on air. The nitrogen, to be of any value, must be present in an easily assimilable form, and modern methods of physiological research had shown that the nitrogen in mushrooms was very insoluble in the digestive fluids. Professor Mendell, of Yale, in a report to the American Physiological Association on the food value of vegetable fungi, said:

"Chemical analyses were combined with experiments in artificial digestion, and the result was given to the benefit of the human stomach and bowels. The latter was found to be able to extract only a fraction of the nitrogenous matter from the solid ingredients of mushrooms, and the nitrogen was not yet in a form which could be assimilated."

cessories, but they do not deserve the term 'vegetable beefsteak.' Their nitrogen is largely in the form of non-proteid bodies. The amount of fat, cholesterin, soluble carbohydrates, crude fibre, and inorganic substances contained in them corresponds in general with that found in other vegetable foods, such as peas, corn, and potatoes."

The United States Department of Agriculture had also taken up this subject, and in the *Farmer's Bulletin*, No. 79, had published the results of an extended examination into the value of mushrooms as food. The following table showed the relative value of mushrooms and other articles of diet as ascertained by the department's chemists:

	PARTS IN 100 PARTS OF FRESH SUBSTANCES.				
	Water.	Total nitrogen.	Non-albuminous nitrogen.	Protein.	Carbohydrats
Common mushroom (<i>Agaricus campestris</i>)	91.30	0.60	0.24	3.75	3.50
Shaggy coprinus (<i>Coprinus comatus</i>)	92.19	0.45	0.30	2.81	1.40
Inky coprinus (<i>Coprinus atramentarius</i>)	92.31	0.36	....	2.25	....
Common morel (<i>Morchella esculenta</i>)	89.54	0.49	0.20	3.06	1.60
Sulphury polyporus (<i>Polyporus sulphuratus</i>)	70.80	0.96	0.31	6.00	3.56
Oyster mushroom (<i>Pleurotus ostreatus</i>)	73.70	0.63	0.33	3.94	4.84
Potatoes	75.50	0.40	0.20	2.50	20.90
Cabbage	92.50	0.18	0.07	1.13	0.70
Carrots	87.50	0.18	0.10	1.13	....
Wheat bread	35.40	1.52	0.06	9.50	52.80
Beefsteak	63.00	3.00	....	18.75	....

Summing up the results of their work, the department stated that the food value of mushrooms was not high. The amount of "protein" contained in them ranked with that of potatoes, and they contained less carbohydrate matter. Further, non-albuminous nitrogen had very little food value, and most of the nitrogen in mushrooms was non-albuminous, while from twenty-six to fifty-nine per cent. of the total solid constituents was indigestible. If, the writer said, a person depended on mushrooms wholly, he would have to consume about eight pounds a day. As a condiment and food accessory they were useful, but as a steady article of diet they were not to be commended.

With a view of ascertaining the correctness of these results, the writer had undertaken a series of experiments. Solutions approximating as closely as possible to the natural digestive fluids were prepared. These consisted of faintly acid and alkaline saliva solutions containing the ptyalin ferment, to represent the natural secretions of the mouth; acid pepsin solutions of approximately the strength of the natural gastric juice; alkaline pancreatin solution; and, finally, a solution of diastase to ascertain the amount of starchy constituents of the fungi.

Typical specimens of the *Agaricus* and *Coprinus* species were procured as representatives of the usual commercial mushrooms, together with one or two varieties of the canned article, the exact nature of which was not ascertained. The digestibility of these in the various solutions was ascertained in various ways. In all cases the fluids were kept at a temperature of 104° F. for twelve hours, in order to approximate the conditions obtaining in the internal economy. The mushrooms were used in the fresh state, after being boiled in water for

an hour, and also after baking over a gas stove until properly "cooked."

As these digestive experiments only approximated natural conditions, the results could at best only approach accuracy, and, consequently, the writer would not attempt to give exact figures. The results might be briefly summarized:

Ten grammes of the fungi were taken in the fresh state, and also after boiling and baking, and reduced to a fine state of division by passing through a No. 30 sieve. The finely divided matter was then digested in a hundred cubic centimetres of the pepsin solution at a temperature of 104° F. for twelve hours. A similar procedure was followed in the case of the other digestive solutions. The results showed that cooking had little effect on the digestibility of the mushrooms, except in the presence of the starch-converting ferments. The amount of solid substance of the mushrooms soluble in pepsin or pancreatin solutions did not, as a rule, exceed ten per cent., and usually varied between five and ten per cent. In one or two experiments the pepsin solution did not appear to have any action on the fungi at all. The saliva solutions seemed to have very little action, not over two per cent. being digested. This, possibly, was due to their dilution. Diastase possessed most activity, particularly on the boiled mushrooms. The soluble portion averaged ten per cent., and in one or two instances ran as high as fifteen per cent. of the total solid contents. In all cases the bulk of the fungus remained undissolved. These results showed fairly well that vegetable fungi were, at least, very difficult of digestion. In a series of parallel experiments with beefsteak and potatoes, the latter almost completely disappeared in about two hours' time, while after twelve hours' digestion the mushrooms remained apparently unchanged.

It was easy, in view of recent researches, to see how the exaggerated ideas of the value of mushrooms as food had originated. The old method of ascertaining the proteid value of foods by determining the total nitrogen and multiplying by 6.25 (the factor obtained from the percentage composition of proteins) might answer well enough in certain cases, but had long since been found to give erroneous results frequently, as in the case already referred to. The text-book statements that mushrooms average thirty-three per cent. of proteid matter, while bread contained only eight per cent., were based on an unfair comparison. The thirty-three per cent. referred to the percentage of solid matter only, while the eight per cent. of bread was based on the total constituents. The percentage of "protein" in the whole mushroom never exceeded five per cent., and most of this was indigestible, while bread averaged eight per cent. in an almost entirely assimilable form. To deserve the name "vegetable beefsteak," the fresh mushroom should contain about fifty per cent. of available proteid matter.

One of the objects of the Mycological Club was to show the public in general the value of vegetable fungi as articles of diet, and it was with the idea of determining their value satisfactorily that the author's experiments had been carried out. The results were not what we had hoped for, but *magnum est veritas et prevalebit*. The fact that the average man had declined persistently to take up mushrooms as food, just as he had declined to use brown bread in preference to white, showed us that "the untutored instinct of the natural man had long since reached the same goal" to which we had been led by the results of experimental research.

Original Communications.

THE X RAY

IN THE DIAGNOSIS OF TUBERCULOSIS.*

By J. RUDIS-JICINSKY, A. M., M. D.

CEDAR RAPIDS, IOWA.

It is difficult to say to what final uses the simple fact discovered by Professor Röntgen that different substances are more or less opaque to the X ray, according to their density, may be put; but one point is now sure, that a very important application of the X ray will be in connection with *early* diagnosis of tuberculosis, and perhaps all diseases of the lungs. Those who have experimentally followed the progress of the X ray since its discovery know very well that its phases have changed from day to day, and are still changing so rapidly that the discoveries, modifications, and different applications hardly could be recorded systematically to satisfy the great interest of our profession at large. Under these circumstances I will call your attention only to the results of my own actual and personal experimentation with *twenty cases of tuberculosis* in different stages, with different data, and different diagnoses, with and without the X ray. I have to state also that any reliable data concerning the infection, arrest of the same, history, etc., can with real accuracy be computed, since no experiment is accurate unless conditions are equal, or nearly so. With the application of the X ray in these cases the conditions were favorable not only for comparison, but for the accurate recognition of the stages of the disease so destructive to the human family.

Keeping in mind that a very large proportion of those affected with tuberculosis may recover their health under proper treatment, or their life may be prolonged, if the diagnosis is made in time, we will find in the application of the X ray in the near future a great help to us, for in this direction lies its highest field of usefulness to humanity.[†] The physician has ever been on the alert to find the beginning of this disease of the lungs; he could not make out the isolated foci and nests of the bacillus in the lungs with his stethoscope, the percussion hammer, or even his valuable microscope, which in the later stages may give absolute proof or may not.

Of the many diseases now known to be dependent upon the presence of some species of bacteria none is of so much interest to the physician as tuberculosis. It wages both open and clandestine warfare, and claims hundreds of thousands of victims every year in this and other countries. How long is it that we have been able,

aided by autopsy and microscope, to fully comprehend the fearful extent of its ravages?

In 384 autopsies of children who died of acute infections in a hospital in Copenhagen in 1894, 195 showed undoubted evidences of tuberculosis. They had shown no signs of the disease in life (*Statistik Danske*, 1895). Such a state presents itself also in this country, especially in the large cities. We know that tuberculosis affects more individuals than any other form of infectious disease, for it has been roughly estimated that out of every five deaths from all other causes, one is due to this cause. We know that tuberculosis is contagious; we know that it is hereditary and due to *Bacillus tuberculosis*; how introduced into the body; how it spreads; how many forms and stages we have. We know also how to discover and prepare the bacillus in later stages of the disease; we have many methods of treatment—some *ne plus ultra*—and the results. That the so-called specific treatment, Koch's method by inoculation with tuberculin or other serum, hygienic and climatic treatment, with environment of the patient, etc., are, so to say, *worthless when applied too late*, when the disease itself was not recognized right at the start, and treated accordingly.

I shall not burden you with a long list of dry details, but give some interesting comparative points of twenty cases in tabular form (with my own radiographs),* collected with care, showing the relation between the usual method of diagnosis and one with the X ray, which shows the degree of accuracy and truth that leaves very little to be desired, as proved especially in those cases where there was a chance of autopsy. My cases have been taken from one district, comparatively healthy, with permanent population, and were collected by me and some of my colleagues during the last two years, give a difference in time, age, and sex only. Please look at the following table, showing the necessary data for our usual diagnosis in those twenty cases, and compare with the diagnosis with the X ray.

At the twelfth triennial meeting of the International Medical Congress, held recently at Moscow, Russia, tuberculosis received a larger share of attention than any other subject presented. And if I am not mistaken, Professor Ilava, well known in pathological anatomy from the Bohemian University of Prague, with other eminent men, during the interchange of experiences from every country and clinic, concluded, pointed out the necessity of *early* diagnosis, and treatment itself should be of value.

As you see, in all our cases the disease, made the usual way was, tuberculosis, and in 18 of those cases went then to San Francisco, Canada, or to Mexico, a few died from the disease, others returned home again, etc. (Table, page 100, next page).

* Some of the radiographs are given in full of detail, which I have not room to present here.

* Read before the Nebraska State Medical Society, Omaha, Dec. 18, 1898, and revised, with additions.

† Dr. Beclere, Dr. Blaudet, and Dr. Teisser, of Paris: *The X Ray in the Diagnosis of Tuberculosis*. Professor Bergonié, of Bordeaux, and Professor Lanet, of Lyons, France: *The X Rays in the Diagnosis of Tuberculosis*. Koch's experimentation, etc., 1898.

Twenty Cases of Tuberculosis—Usual Diagnosis (Pars Prima).

	Temp.	Pulse	Respiration	Arterial blood pressure	Abdomen	Tracheal breath	Cough	Expectoration	Thoracic	Hemoptysis	Pain	Dyspnea	Cath.	Sweats	Diarrhea	Pulse	Edema	Depression	Frontus	Resonance	Breathing	Color of skin	Usual diagnosis	
1	22	M	5 ft. 1 in.	140	98.6	Yes	Yes	Scanty	Yes	No	Below clavicles	No	No	No	Yes	No	Rapid	No	No	Increased slightly	Slightly impaired	Inspira- tion jerky ; expira- tion pro- longed	No	White, Negative
2	27	F	5 ft. 1 in.	120	98.6	Yes	Yes	Aggra- vated	Yes	Opious	Infra- clavicular	Yes	Yes	Yes	Copious	Yes	Irregu- lar	Ankles	Supra- clavicular	Increased slightly	Dullness, Negative	Vesico- bronchial	Yes	White, Second stage
3	28	M	5 ft. 1 in.	140	98.6	Yes	No	No	Yes	No	No	No	Yes	Yes	Yes	No	Slow	No	No	Increased	Dullness, Negative	Vesico- bronchial	No	White, Negative
4	30	F	5 ft. 1 in.	120	98.6	Yes	No	Profuse	Yes	No	On the right	Yes	Yes	Yes	In- creased	Yes	Weak	No	No	In- creased	Dullness	Bron- chial	Yes	White, Third stage
5	31	M	5 ft. 1 in.	140	98.6	Yes	Yes	Yes	Yes	Yes	On the right	Yes	Yes	Yes	In- creased	No	Rapid	No	No	In- creased	Dullness	Bron- chial	No	White, Third stage
6	32	M	5 ft. 1 in.	140	98.6	Yes	Yes	Yes	No	No	No	No	No	No	No	No	Slow	No	No	In- creased	Dullness	Bron- chial	No	White, Third stage
7	33	F	5 ft. 1 in.	120	98.6	Yes	Yes	Yellow	Yes	Yes	All over the chest	Yes	Yes	Yes	Copious	Yes	Rapid	Feet	No	Infra- clavicular	Gurgling rales	Yes	White, Third stage	
8	34	M	5 ft. 1 in.	140	98.6	Yes	Yes	Some	Yes	No	Below clavicles	No	No	No	Yes	No	Rapid	No	No	Infra- clavicular	Dullness	No	White, First stage	
9	35	M	5 ft. 1 in.	140	98.6	Yes	Yes	Some	Yes	Occa- sional	No	Yes	Yes	Yes	Yes	Weak	No	No	No	In- creased	Dullness	Bron- chial	No	White, Second stage
10	36	M	5 ft. 1 in.	140	98.6	Yes	Yes	Yes	Yes	Occa- sional	No	No	No	Yes	Yes	No	No	No	No	In- creased	Dullness	Feeble	No	White, First stage
11	37	F	5 ft. 1 in.	120	98.6	Yes	Yes	Persistent	Yes	Blood- streaked	Chest	Yes	Yes	Yes	Profuse	No	Rapid	No	No	In- creased	Dullness	Impaired	Yes	White, Second stage
12	38	F	5 ft. 1 in.	120	98.6	Yes	Severe	Purulent	Yes	Spitta- ble	Chest	No	Yes	Yes	Profuse	No	Slow	No	No	Increased	Hollow	Adven- titious sounds	No	White, First stage
13	39	M	5 ft. 1 in.	140	98.6	Yes	Occa- sional	None	No	Occa- sional	Chest	Yes	Yes	Yes	Profuse	No	Weak	No	No	Vocal	Dullness	harsh	Yes	White, First stage
14	40	F	5 ft. 1 in.	120	98.6	Yes	Occa- sional	Some	Yes	Occa- sional	Some	No	No	Yes	Yes	No	Slow	No	Supra- clavicular	Negative	Bron- chial	No	White, Second stage	
15	41	M	5 ft. 1 in.	140	98.6	Yes	Yes	Glairy	Yes	Occa- sional	Sharp	Yes	Yes	Yes	Yes	Rapid	No	No	Supra- clavicular	Negative	Negative	No	White, First stage	
16	42	M	5 ft. 1 in.	140	98.6	Yes	Yes	Short	Yes	No	Some	Yes	Yes	No	Yes	Yes	Feet	No	No	In- creased	Vesico- bronchial	No	White, Negative	
17	43	F	5 ft. 1 in.	120	98.6	Yes	Yes	Black	No	No	Yes	Yes	Yes	No	No	No	No	No	No	Dullness	Vesico- bronchial	No	White, Negative	
18	44	F	5 ft. 1 in.	120	98.6	Yes	Yes	Impu- rulent	Yes	No	Some	Yes	Yes	Yes	Yes	Weak	No	No	Supra- clavicular	Negative	Bron- chial	Yes	White, Second stage	
19	45	M	5 ft. 1 in.	140	98.6	Yes	Yes	Aggra- vated	Yes	Occa- sional	Sharp	Yes	Yes	Yes	Yes	No	Rapid	No	No	In- creased	Dullness	Impaired	No	White, Second stage
20	46	M	5 ft. 1 in.	140	98.6	Yes	Severe	Purulent	Yes	Occa- sional	Sharp	Yes	Yes	Yes	Yes	No	Rapid	No	No	In- creased	Dullness	Bron- chial	No	White, First stage
21	47	M	5 ft. 1 in.	140	98.6	Yes	Some	Some	Yes	Occa- sional	Some	No	No	Yes	Yes	No	Weak	Feet	No	Increased	Dullness	Bron- chial	No	White, First stage

* Biol.

Twenty Cases of Tuberculosis—X-ray Diagnosis (*Pars Secunda*).

Case.	WEIGHT IN THREE MONTHS.			Height.	Girth of chest.	Forced ex-piration.	Forced in-spiration.	Girth of waist.	Number of respirations.	Mar-ried.	How many chil-dren.	Miscar-riages.	Puerper-al sep-tis.	Disease of gener-ative organs.	Men-strua-tion.	Stage.	X ray diagnosis—Fluoroscopic shows:
	1st.	2d.	3d.														
1	110	106	104½	5.1	29	28	30	27	19	No.				Yes.	Irregu-lar.	First.	Slight haziness, indicating the beginning of tuberculous infiltration.
2	123	112	118	5.6	30	28	31	29	17	Yes.	6	2	Once.	No.	Irregu-lar.	First.	Same (accompanied by dullness).
3	134	128	120	5.3	31	30	32½	29½	20	No.						First.	Darkness at lower portion of lungs; pleuritic thickenings; slight haziness at left apex.
4	132	122	106	5.4	28	27½	29½	28½	21	Yes.	2	None.		No.	Irregu-lar.	Third.	Circumscribed spots of bright reflex, surrounded by narrow, dark rings; cavities also in the midst of an area of dense shadow.
5	135	130	129	5.11	29	28	30	28	20	Yes.	None.					Third.	Intense darkness, showing degree, position, and relation of large areas of infiltration, and also consolidated tissue; also isolated foci.
6	169	150	118	6.0	32	31	33	30	19	Yes.							Reflex is abnormally clear, and the movement of the diaphragm is restricted; asthma.
7	Could not obtain.			5.9	27	26	27½	24	21	No.						Third.	Decided shadows on both sides, with circumscribed spot on the left of bright reflex with dark, irregular lines around; cavity in the left apex of the size of a hen's egg. Autopsy corroborated the fluoroscopic picture.
8	114			5.6	27	26	29	26	18							First.	Slight haziness on the right.
9	128	115	110½	5.10	26	25½	27½	26	20	Yes.	1					Third.	Shadows indicating consolidation on both sides, enabling us to recognize more fully and accurately the degree, position, and relation of areas diseased; diminution of the volume of the lungs.
10	129			5.7	27	26½	28	26	19	Yes.	3					Second.	Intense darkness, especially at the lower portion of the lungs, indicating pleuritic thickenings over consolidated tissue, with dark spots on the right and left lobe, especially toward apex.
11	119	106	109	5.3	30	28	31	29	18	Yes.	6	2	Once.	Endo-metri-tis.	None.	Second.	Chesky transformation, with cavities near left apex and opposite upper lobe; opaque to the X-ray in ratio of their density. Cavities not near the surface, not indicating to be near the surface.
12	120	115	109	5.2	29	28	30	27½	20	Yes.	1	2			Irregu-lar.	First.	Slight haziness, indicating infiltration on the left; darkness at lower portion, showing old pleuritic thickening; corroborated by autopsy. Died with tubal pregnancy. Rupture, dead in a few hours.
13	209½	190	170	6.0	36	35	38	29½	19	Yes.	4					Negative.	Lungs normal. Edema of pericarditis giving shadow which was distinct only from the heart shadow by its greater density. Patient, temporarily cured, but has died of a cerebral aneurism.
14	128			5.4	30	29	32	27	18	Yes.	8	2	Once.	Yes.	Irregu-lar.	First.	Dark spots on the left side.
15	138	129	129	6.0	31	29	32½	28½	17	No.						First.	Shadows indicating dark spots on the right side.
16	118	111	110	5.8	37	36	39	30	20	Yes.	8					First.	On the left side, second shadow, which was not so distinct as the first.

Twenty Cases of Tuberculosis (Continued).

CASE.	WEIGHT IN THREE MONTHS.			Height.	Girth of chest.	Forced expiration.	Forced inspiration.	Girth of waist.	Number of respirations.	Married.	How many children.	Miscarriages.	Puerperal sepsis.	Disease of generative organs.	Menstruation.	Stage.	X ray diagnosis—Fluoroscope shows:
	1st.	2d.	3d.														
17	105	.....	.....	5.0	28	27	29	26	18	No.	.....	.....	.....	.....	.....	First.	Isolated foci; spots on the left.
18	123	120	120	5.6	30	28	31	29	18	Yes.	4	1	.....	Metritis.	Irregular.	Second.	Intense darkness on both sides.
19	150	145	140	5.9	37	35	38	30	19	No.	.....	.....	.....	.....	.....	Negative.	No shadow; lungs transparent.
20	137	130	130	6.0	34	33	35	28	19	Yes.	None.	.....	.....	.....	.....	Second.	Dark shadows situated about an inch from apex on the right; dark spots over the area of the left lung nearer the posterior than the anterior surface.

medebitur," it is said very easily. Look at the tabella, pars secunda, and compare the diagnosis made by the X ray.

Since the X rays began their triumphant march throughout the world, our means of diagnosis, not only in surgery, but in medicine, have been greatly enlarged, and some of our methods of treatment changed wonderfully. In our twenty cases, as tabulated, the fluoroscope enabled us to recognize more fully and accurately the degree, position, and relation of areas diseased, giving different shadows of infiltration and consolidation of the lungs, and delineating plainly the limits of those areas. Dr. J. Edward Stubbert, physician in charge of the Loomis Sanitarium for Consumptives, states* that during the year 1897 it was demonstrated that in the Röntgen rays and the fluoroscope we possessed accurate agents for diagnosing tuberculous changes of lung tissue in their various stages. *They were used not only as factors corroborative of results arrived at by auscultation and percussion, but in some instances for discovering isolated foci of infection not recognizable by ordinary methods.*

If we look over the X-ray picture of our table and compare part first with part second, and take also into consideration the statement of Professor Loomis, we must at once recognize the value of the X-ray diagnosis. "Acute tuberculosis, in which there is a dissemination of tubercles throughout the lungs, can not be differentiated by the physical signs. The diagnosis rests later upon an examination of the sputum, but is only of value when a positive result is obtained."†

We have to remember that our cases developed in a vicinity where the climate is healthy and invigorating, dry and tonic, a perpetual foe, as said, to consumption and malarial diseases. The refreshing prairie breezes of summer, the fair and mellow autumn days, the frequent dry and sunny seasons of winter, make up a year of beauty. We can not help thinking under these circumstances, of a direct tuberculous infection only, being unable to find another cause.‡

* *New York Medical Journal*, April 9, 1898.

† Von Jakch state that the bacilli are never present in acute miliary tuberculosis.

‡ Perhaps poor position, heredity or exposure to the bacilli in a dry form in the dust, especially on the well-known windy days.

Billet (*Archives gén. de médecine*, August, 1892) refers, under similar circumstances, chiefly to cases in which the diagnosis of tuberculosis is given up generally in favor of enteric fever, and chiefly because the patient is a little better or perhaps seems to recover. It is among these cases, so to speak, of false enteric fever that the cause must be sought for, and the X ray gives us the best means of diagnosis. In the question of the possibility of the arrest of acute tuberculosis the author refers to the evidence of morbid anatomy which shows not infrequently the healing of pulmonary tuberculosis. There is no reason why tubercle bacilli should not behave like other micro-organisms and fail to develop either owing to unfitness of soil or their own diminished virulence. Abortive attacks of other infective processes are admitted.

Knowing all this, we have to acknowledge that an early diagnosis in tuberculosis means very much, if not everything. It is important to decide whether the adventitious sounds, including subcrepitant râles, which are heard are due to the first stage of tuberculosis, and, when the breathing is harsh in such situation, if there are cavities already, both of which may destroy life, while one is far more difficult to relieve than the other. The X ray makes a positive diagnosis as to this difference. Circumscribed spots of bright reflex surrounded by narrow, dark rings on the plate of the fluoroscope show cavities in the lungs; their adhesions are opaque to X rays and, on the other hand, a slight haziness in the lungs indicates the beginning of tuberculous infiltration. Healthy tissue is transparent, gives the outline of the respective organs, but not a shadow.

While the death-rate of consumption in the past has been appalling, we feel that with the X ray we shall arrive, perhaps, at a better period of its history, when the prophylactic measures, with proper treatment, will begin at an early stage, and its victim is possessed of sufficient vitality or physical resistance to enable the system to rid itself of germs of the disease (Guttmann, Hlava, Bouchard, Maixner, Koch, Brandt, *et al.*).

The most interesting features in our twenty cases form Cases VII, XIII, XVI, and XVII. In Case VII the usual diagnosis of the third stage of tuberculosis was confirmed with the X ray, which gave

us decided shadows on both sides of the lungs, with a plain, circumscribed spot in the left apex, of the size of a pigeon's egg, of bright reflex, with a dark, irregular line around it, extent in direct relation to comparative density of the shadow thrown on the plate of tungstate of calcium of the fluoroscope. The patient died from



Pleuritic thickenings show dark.

Pleuritic Thickenings over Consolidated Tissue.—Dark spots in the field of marked shadow, especially at the lower portion of the lungs.

Emphysema.—The reflex is abnormally clear.

Asthma.—The reflex is abnormally clear, and the movement of the diaphragm restricted.

Pleural effusions are shown in black shadows, the upper level of which may be agitated by succussion.

Tuberculous Infiltration.—Slight haziness in the beginning, enabling us to recognize more fully and accurately the degree, position, and relation of areas diseased. May or may not be accompanied by dullness.



FIG. 3.—Tuberculous consolidation (c).

Tuberculous Consolidation.—Decided shadows.

Cavity.—Circumscribed spot of bright reflex, with irregular line around; extent in direct relation to the comparative density of the shadow thrown upon the plate of the fluoroscope. They may be located also in the midst of an area of dense shadow.

Isolated Foci of Infection.—Slight haziness over small spots clearly defined. Healthy tissue allows the X ray to pass freely, and thus record the location and size of the foci.

Idiosyncrasies are opaque to the X ray.

Simple pleuronic bands are transparent.

Abnormal concretions appear about as opaque as bone.

Foreign Bodies.—Black (metal, lead, etc.).

Destruction of the lung tissue would be distinguishable just as well as any other abnormality in size, etc., from the surrounding shadow, by a line of demarcation, so to say.

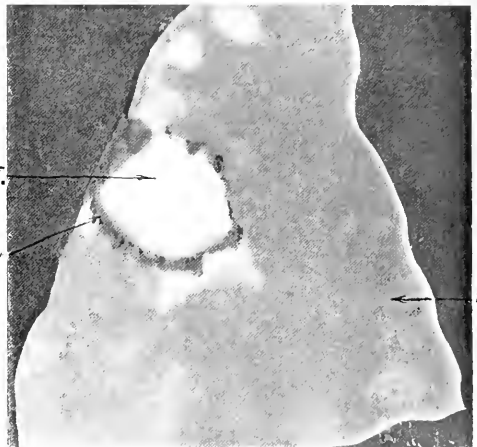


FIG. 4.—Cavity. Circumscribed spot of bright reflex (c); irregular surrounding line (f); haziness (f).

It is of interest, from a practical point of view, to note that the application of the X ray in nearly all our cases has yielded good results. This number of experiences and experiments with man, selected from direct practice, go to show that the X rays were accurate



FIG. 5.—Circumscribed spots situated in the midst of an area of dense shadow (g, h).

and very useful for comparative diagnosis, equally applicable in all stages of tuberculosis, as well as the best means of differential diagnosis in nearly all diseases of the lungs.

In conclusion, I would draw especial attention to the simple method of the application of this means of diagnosis, a great advantage in experimenting, and also the best proofs of the same through the negatives, if they could only be developed. This last has been proved by

a large number of investigations on the subject in Europe as well as in this country. I possess, too, an extensive series of experiments on animals, especially rabbits, giving excellent results in radiography, but would not dare to say that the X ray in its undeveloped stage is as yet applicable in every case.

ELECTRO-HEMOSTASIS IN SURGERY.*

By A. J. C. SKENE, M. D.

IN order that you may readily compare that which I have to say about electro-hæmostasis with the accepted methods of controlling hæmorrhage in surgery, I crave your indulgence while I refer briefly to the ligature as a hæmostatic agent.

In looking backward upon the evolution of surgical hæmostasis one clearly sees that the discovery of an aseptic ligature which could be inclosed in the tissues without disturbing the healing process was one of the greatest triumphs in surgery. Such ligatures answered all the requirements of the surgeon so well that he has been disposed to rest satisfied in the belief that the ideal method had been attained. Even at the present time one is liable to be considered hypercritical and fastidious if he questions the utility and competence of the surgery of the day in controlling hæmorrhage in incised wounds. Nevertheless, the modern ligature has its defects and failings when employed in certain operations and in trying conditions.

Catgut as a ligature is difficult to sterilize and keep perfectly clean, and it is not altogether reliable in ligating blood-vessels in the pedicle of an ovarian tumor, for example. More recently I have discovered that catgut is especially objectionable in wounds which are septic or contain necrotic tissue, such as a suppurating ovarian tumor or a pyosalpinx. The broad-ligament pedicle in such cases is nearly always septic, and no matter how clean the ligature may be when applied, it soon becomes contaminated by contact with the diseased tissue, and being dead animal tissue it adds its own substance to the field for the culture of bacteria. A ligature thus contaminated is not absorbed, but acts as a foreign body for the promotion of evil and the interruption of the process of repair, and is responsible for the bad results which sometimes follow in operations done according to all the rules of modern surgery. Others have had similar results, if I may judge from cases which have come to my notice. On this account catgut is the worst material that can be left in a wound which is not perfectly free from germs of disease. Of minor importance, but still worthy of notice, is the fact that dry catgut is not very flexible and easily handled, and if softened by immersion in a sterilized or antiseptic solution it stretches

or breaks, and can not be depended upon to close the blood-vessels and hold them, and therefore hæmorrhage may occur. This has happened in abdominal operations, and on that account many operators, even in the early days of modern surgery, preferred silk ligatures for much of their work.

If I mistake not, the majority of surgeons at the present time use silk ligatures in ovariectomy, hysterectomy, and similar operations; and yet the silk ligature does not meet all the demands of surgery. The objectionable features of silk are that it is not absorbed, but remains in the tissues where it is placed, quiescent in many cases, but occasionally causing much mischief. This has been so fully recognized by some of the leading surgeons that they have raised the question whether this non-absorbable ligature should ever be used in abdominal surgery. Judging from my own observations and the meagre records found in surgical literature on this subject, it appears that silk ligatures either become encysted and remain where they are placed, or, becoming freed from the protecting exudate, wander about until they are thrown out by the eliminative process of suppurative or ulcerative inflammation.

Fine ligatures of silk applied to small blood-vessels in areolar and muscular tissues may remain indefinitely; but those used in abdominal operations are likely to escape into some neighboring viscus. It appears that this harmful action of silk ligatures has escaped observation, owing to the fact that they cause no trouble until long after recovery from the operation in which they were employed. If the silk is clean when used, no immediate disturbance of the process of healing is caused, and so far the silk appears to be a perfect ligature. Still, it is not so, for the necessary walling in of a silk ligature requires more time than the disposal of an absorbable ligature, and the quantity of new material left in the wound surrounding the ligatures retards the process of repair. On this account the tissues in the neighborhood of the wound remain indurated, and do not regain their elasticity and freedom from tenderness for a long time, even when union takes place promptly and without supuration.

Were this all of the evils that can be charged against the silk ligature one might be satisfied; but worse follows their use in pelvic and abdominal surgery. For example, unless the conditions are unusually favorable, the pedicle of an ovarian tumor can not be tied tightly enough to close the arteries in a way to make sure of controlling hæmorrhage with certainty. There is a liability in thick pedicles for the tissues to break under the pressure of the ligature and permit the blood-vessels that have been temporarily closed to open again and permit bleeding to take place.

Whenever the tissues of the pedicle are rendered friable by disease or degeneration, it is well nigh impossible to control hæmorrhage with a ligature of any kind. Silk is as bad as, or worse than, any other, for it cuts the

* Read before the Society of Alumni of Bellevue Hospital, November 2, 1898.

tissues if tied with the necessary tightness. These are the defects which can be alleged against the silk ligature as a means of immediately and permanently arresting hemorrhage.

The subsequent behavior of the ligature and the character of the stump to be repaired after ligation are still more unsatisfactory to both patient and surgeon. The pressure of the ligature upon the nerve tissue, as well as the traction of the parts toward the point of constriction, especially in a short, broad pedicle, cause irritation and pain. There is a large mass of strangulated tissue projecting beyond the ligature which has to be disposed of by a process of degeneration and absorption; the ligature, and the tissue of the pedicle beneath it, have to be closed in by a deposit of plastic material, which in time is removed by absorption and the ligature set free. During all these weeks or months required to complete the repair of the stump there is oftentimes considerable pain and tenderness—nothing dangerous or alarming, but very annoying. Not infrequently, when a diseased Fallopian tube forms part of the pedicle, there is a secondary attack, may be several, of inflammation in the stump caused by the tube remaining open and giving out septic material. These sequelæ have been passed unnoticed by many surgeons, and are lightly spoken of by others, presumably because there was no danger to the life of such patients. But the best operators, who have given attention to this subject and have watched their results with scientific accuracy, have observed these results and recorded them.

This very interesting question of the disposal of silk ligatures has not yet been answered fully, so far as I can ascertain. Guided by my own experience, I believe, as already stated, that ligatures left in the peritoneal cavity as at first encysted and finally liberated, and remain in the peritoneum or escape through some of the viscera.

The last and most important of all the objections to the ligature is the fact that canals (such as the Fallopian tubes, ureters, and appendix vermiformis) lined with mucous membrane can not be closed permanently with any kind of ligature that has ever been used.

Having observed these disappointing actions of ligatures, I naturally looked for something better in surgical hemostasis. This I found in the work of Dr. Thomas Keith, who taught me his method of treating the pedicle in ovariectomy by the clamp and cautery, which in theory and practice was most satisfactory. No doubt this feature of his operating contributed largely to making him the most successful ovariectomist of his time. The experience of years and a large number of operations in which this method was used has fully confirmed my confidence in this way of controlling hemorrhage. The method was never adopted by surgeons, however, owing, in part, to ignorance of the principles of the method, but more especially to the difficulties in the technique of the procedure. Many believe I, and still believe that it is necessary to char the stump with the cau-

tery in order to stop the bleeding; but the fact is that Keith applied a clamp with broad jaws to the pedicle, and compressed it strongly, and then applied a large cautery iron to the upper side of the clamp until the instrument was heated sufficiently to desiccate the tissues, but not to char them. This required much time and large experience in handling the cautery iron in order to obtain the degree of heat necessary, and to know the length of time it should be applied. In other words, to treat a broad-ligament pedicle in this way required a knowledge and judgment that but few had the patience to acquire.

I confess that I was not sure of my work in my first operations with this method, and when ovariectomy became improved so that better results were obtained and materials for ligatures were made aseptic and more appropriate, I gave up the clamp and cautery and used the ligature; but I was never satisfied with the results, and earnestly sought to overcome the objection to the clamp and heat to control hemorrhage. While thinking of how to overcome these difficulties my attention was called to the use of electricity in heating laundry smoothing irons. It then occurred to me to adapt the same heating power to surgical instruments, such as the clamp and forceps.

My requirements in this regard were explained to Mr. Louis M. Pignolet, who soon produced the instruments and appliances required, which I shall now show you.

Directions for Using the Electrical Forceps.—The method of arresting hemorrhage with these forceps consists in firmly compressing a portion of the bleeding tissues, or the end of a blood-vessel, between the jaws of the instrument, in order to expel as much of the moisture as possible, and then desiccating the compressed tissues by heat generated in the jaws by the electric current. In this way the walls of the arteries become united and hemorrhage is effectually prevented. The temperature required for desiccation is from 180° to 190° F., which is high enough not to char or burn the tissues, but simply to desiccate or to cook them.

The current required to heat the smallest instrument is two amperes and eight for the largest, at a pressure of three volts and a half.

The forceps are sterilized in the same manner as other instruments. A little sterilized vasoline, or similar preparation, is rubbed over the inner side of the jaws of the forceps, which will prevent the tissues from adhering to the instrument.

The rubber-covered end of the electrical cable is sterilized in boiling water and afterward wrapped in a sterilized towel, or immersed in an antiseptic solution, such as a five-per-cent. carbolic solution, until needed. Bichloride of mercury should not be used, as it attacks the metal sleeves at the end of the cable.

In applying the forceps all the tissues to be treated should be firmly compressed between the heated jaws of

the instrument, for if a portion extends beyond, a second application will be necessary. Before the electric current is turned on a shield is applied, where needed, between the forceps and the adjacent tissues to protect them from injury by contact with the hot instruments. Tissues which do not touch the jaws require no protection.

The two connector sleeves at the end of the flexible cable are then slipped over the two terminals on the end of the forceps and pushed firmly into place to make a good electrical connection. If the electric current has been previously turned on, the putting of the connector sleeves into place completes the circuit and establishes the current.

The current required to properly heat the forceps is noted for each one made; therefore it can be regulated to suit the forceps from the indications of an amperemeter included in the circuit to measure the strength of the current. If no amperemeter is convenient, experiments upon a piece of raw tissue will enable the operator to ascertain the temperature by the sense of touch and examination of the tissue.

One adjustment of a transformer or of the rheostat of a storage battery will be sufficient, if the same adjustment be made in subsequent operations; but the battery should not be used when its charge is nearly exhausted, if uniform results are desired, unless an amperemeter is employed. For the same reason the transformer should be fed by an electric-light current, as this has an almost constant pressure, and not by one used exclusively for power, as such a current is subject to considerable change of pressure. An amperemeter should be used with the ordinary primary battery, for the polarization and the varying strength of the exciting fluid prevent it from being adjusted so as to furnish a current of uniform strength.

Before removing the forceps, the tissues projecting beyond its jaws are cut off, which may, in some cases, be done while the heat is being applied, in order to save time. There being danger of losing sight of the stump by its dropping back into the abdominal cavity, as may happen in ovariectomy, the shield forceps should be left in place to hold the stump for inspection. The electrical forceps is then carefully opened far enough to allow the desiccated stump to slide out from between the jaws in the direction of the teeth. Care in this is important, for, if the tissues should adhere to the instrument, which may happen if vaseline is omitted, they might be torn apart, and a ragged stump left.

Before using the forceps for the first time, it is instructive to experiment with them on a piece of raw tissue so as to become familiar with their action, as well as to ascertain whether the source of electricity is suitable and can be properly controlled.

Absence of bleeding upon the removal of the forceps shows that the desiccation has been effective, and the stump can be left without fear of secondary hemorrhage.

The occurrence of bleeding immediately upon the removal of the forceps indicates that the desiccation has been insufficient, or that some of the tissues have escaped the grasp of the forceps. In this event one should reapply the forceps to the stump and repeat the heating, giving about ten per cent. more current, or continuing the heat for a longer time, if the bleeding has been due to insufficient desiccation.

The time required for desiccation varies from half a minute to two minutes, according to the thickness of the compressed tissues or size of the arteries; two minutes being required for the ordinary ovarian pedicle and the broad ligament. If the tissues to be treated are very thick, the current can be continued for three or four minutes, or even longer, without danger. When the time of application has expired the current can be shut off by a switch, or by removing the connector from the forceps. The desiccation can be hastened by starting with more than the usual current and continuing the greater current for about a third of the time of application. For example, if the current necessary to properly heat the forceps is *ten amperes*, and the time of application is two minutes, give *twelve amperes* for about forty seconds, then decrease to *ten amperes* for the rest of the time.

It is well to begin with the forceps closed on the first notch of the lock, and, after the heat has been applied for about half a minute and the tissues have begun to shrink, to close the instrument fully. In this way the greatest possible compression of tissues is obtained.

In the treatment of isolated arteries, the end of the blood-vessel is grasped by a tenaculum and the electric artery forceps applied cross-wise; or the artery is seized by the electric forceps in the same manner as with an ordinary artery forceps when a ligature is to be used.

The end of an artery or the stump of a pedicle when thus treated resembles parchment in gross appearance. The thickness depends upon the size of the blood-vessel or mass of tissue treated. A large uterine artery is reduced to about a line in thickness and an ordinary broad-ligament pedicle to less than an eighth of an inch. The part is translucent and structureless, and thus enables the surgeon to tell at a glance when the treatment is incomplete, by observing the blood-vessels that remain unclosed, and that the pressure and heat should be applied to complete the hemostasis.

Occasionally, in treating a thick mass of tissue, the central portion of it becomes heated before being fully compressed, and then the blood is coagulated in the blood vessels and leaves dark strips or central staining of the tissues, which causes some opacity of the parts. As a rule, however, the blood is pressed out of the blood-vessels before the desiccation begins, and the stump is sufficiently translucent to enable the operator to see any blood vessel that has escaped. The indications or requirements for closing blood vessels are in this way thoroughly fulfilled by the complete fusion together of the

walls of the blood-vessels so that they do not, in fact can not, come apart. This I have demonstrated again and again. While I found in all my observations that the hæmostasis was immediately complete, I was suspicious that when the tissue became softened by absorbing moisture, the blood-vessels might open up, and subsequently bleeding might occur; but many clinical experiences and experiments by others have settled that question beyond all doubt.

Results of this Hæmostatic Process.—Dr. R. L. Dickinson placed a mass of tissue, one part of which was treated by this method, in non-sterilized water and let it remain immersed for about seventy-two hours. At the end of that time the tissue not treated was a soft, pulpy mass that broke down under pressure of the fingers, while the desiccated portion remained firm, though somewhat softened by the water, but with no separation of its component parts, and he could not find any part where cleavage or dissection could be made. I have repeated this experiment many times with the same results.

Finally, I may state that I have employed this method in over two hundred celiotomies and in many vaginal hysterectomies and other operations, and have never had secondary hæmorrhage in any of them.

These are the facts regarding the method as a hæmostatic. There still remains the question of the subsequent behavior of the ends of the blood-vessels and the tissue thus treated; in other words, the process of repair.

From all the facts that I could gather on this subject in actual practice, I concluded that the desiccated tissue became first hydrated and then reorganized, and remained as permanent structures, closing for all time the ends of the blood-vessels, lymphatics, and canals so treated. There was still uncertainty on this point, until Dr. W. H. Seymour, the pathologist to my department in the college, conducted a series of independent experiments in the Hoagland Laboratory. The account of these observations and experiments by Dr. Seymour is as follows:

On examinations made immediately after treatment, he observed that an artery a quarter of an inch in diameter was reduced to about a twelfth of an inch in thickness, and that the structure of the tissues was rendered amorphous by the heat and pressure. The lumen of the artery was obliterated completely, so that no trace of its original structure could be found. A piece of tissue containing arteries, nerve fibres, and muscular and areolar tissue presented the same amorphous appearance, and complete closure of the arteries. So completely fused together were the luminal walls of the arteries that no trace of the original structure could be found; neither could the lumen be reopened by testing the microscopic specimen. Observations were made of sections of the Fallopian tubes, the appendix vermiformis, the ureter, and other canals lined with mucous membrane, and the same amorphous conditions were found. The character of the mucous membrane was so completely

changed in all of them that no part of its original structure could be found by microscopical examination.

The following observations were made on two stumps taken from canine subjects following laparotomy at the end of the third and tenth days of the healing process:

In each instance, prior to the application of the forceps, careful antiseptic measures were followed out in the exposure of the tube and uterus. The hæmostatic forceps of the smallest size was placed on each stump, and an electric current used for one minute of sufficient strength to raise the temperature of the forceps to 180° F.

Microscopical examination three days after the operation showed, at the point of application of the forceps, a constriction corresponding in width to the forceps, on the surface of which were numerous corrugations which corresponded to the same in the blades of the instrument. A decided compression was shown to exist at the point of application, and also a quantity of recent lymph and solid exudate was found over the free end of the stump. Considerable ecchymotic hæmorrhage was noticed at the uterine end of the area treated with the hæmostatic forceps. The free end of the tube was seen to be softened, and it corresponded in appearance with what might be expected in the earlier stages of coagulation necrosis.

On an examination of the luminal portion microscopically, the canal of the tube was seen to be obliterated.

Microscopic examination of a transverse section, under the low power, showed the mucosa and submucosa to be in apposition, no distinct line of demarcation (luminal) having been apparent. Considerable softening existed in the outer portions of the wall of the oviduct. The small round cells could with little difficulty be traced far back into the muscular layers of the organ.

Under the high power were seen countless small cells of the reparative process, intermingling with which were also fine fibrous elements surrounding small and large areas of coagulation necrosis. On studying the luminal portion of the mucous membrane, the small, round cells of one surface seemed to merge or blend with those of the opposite, thus preventing the recognition of the luminal margin of the mucous membrane.

The specimen removed at the end of the tenth day of the healing process macroscopically resembled in its treated portion that of the third-day specimen; the treated area, however, was much duller in outline, firmer over its end, and contained much less softened material and lymph than in the former specimen. The lumen could not be macroscopically identified.

The microscopic appearance of a portion of the oviduct taken through the lumen and mucosa, longitudinally, at the point of application of the hæmostatic forceps, represented marked areas of coagulation necrosis, together with some hæmorrhage by diapedesis, shown in adjacent neighborhoods.

The mucosa of the two walls of the tube were seen to be in contact, thus producing actual obliteration of the lumen of the tube, due to active proliferation of the cells of the mucosa and infiltration of small, round cells.

The advantage which may be fairly alleged for this way of controlling bleeding in surgery is that it is certain and reliable in closing isolated blood vessels or those imbedded in masses of tissue, like an ovarian tu-

mor or pedicle, for example. At the same time that bleeding is arrested, all lymphatics are sealed up, which prevents septic absorption. The tissues of the stump are reduced to the smallest possible size, and there are no raw surfaces left to form adhesions to the abdominal or pelvic viscera, or any foreign substance left in the tissues to cause mischief.

Tissues which have become friable by disease and can not withstand sufficient pressure of a ligature to control bleeding are easily managed by this method. When the tissues that form the pedicle of a suppurating ovarian cystoma or a pyosalpinx contain septic germs, a condition in which the ligature is most objectionable, a better and much safer stump can be made in this way. Bleeding vessels in the abdominal and pelvic cavities can be reached and closed with greater facility than by ligation.

Nerves that accompany the blood-vessels are immediately devitalized, and hence there is less pain and irritation in the stump. The heat employed sterilizes the parts involved, and therefore the operation is perfectly aseptic. To these many advantages may be added that it leaves the stump of a pedicle or the end of an artery in a condition requiring the least reparatory care, so that recovery is more prompt, uneventful, and complete.

THE AMBULANCE SERVICE IN THE WAR.

By MAJOR JAMES JOHNSTON.

SURGEON SIXTEENTH PENNSYLVANIA VOLUNTEER INFANTRY;
LATE SURGEON IN COMMAND, AMBULANCE COMPANY, FIRST DIVISION, FIRST
ARMY CORPS; SURGEON IN CHARGE, DIVISION HOSPITAL, CAMPO, P. R.;
ACTING CHIEF SURGEON, FIRST BRIGADE, FIRST DIVISION, FIRST ARMY CORPS,
BRIARFIELD, PA.

UNDER the provisions of the international treaty known as the Geneva Convention, all hospitals in the field, all ambulances, and ambulance trains must be absolutely in charge of medical officers. They must be honestly used for sick and wounded men only, in order to entitle them to exemption from attack, and must not under any circumstances harbor combatants, or be used by field or line officers for any purpose whatever.

It is only in case of necessity that ambulances may be used to haul food or medicines for the sick, and neither ambulances, nor the medical officers, nor the members of the hospital corps can ever properly assist the army in its active operations in the field. They are all subject to capture by the enemy, and the property may be held as any other property, but the occupants and attendants are to be cared for and permitted to return as noncombatants.

The United States Government has not had use for an ambulance service constituted on international lines until the time of the present war.

The idea of a systematic ambulance service, in American use, having originated with Dr. Jonathan Lettermore, of the Army of the Potomac. It has been adopted by the armies of nearly every civilized nation

and is credited with having done more than anything else to alleviate the horrors of war. But with us there has not until now been occasion to do more than study foreign progress and plan how we would profit by it when necessity required. At the small posts of our regular army there has never been use for more than one ambulance, and the animals for that have been borrowed from the quartermaster on the days when it was taken out for drill.

For this war a complete and elaborate plan was arranged. Orders were issued early in the season providing each army corps of three divisions with three division hospitals and a fourth to be known as the reserve; also for each of its three divisions an ambulance company, together with a fourth, also known as the reserve.

The events of the war having been precipitated in advance of the formation of the army, and especially of the medical department, these plans were never fully carried out. No hospital and no ambulance company was fully equipped, neither were they properly manned, and in most cases the medical officers were simply staggered by duties not in the line of their professional work, with which they had not the least preliminary acquaintance.

The printed orders described hospitals to the extent that they were to be managed by six surgeons, six hospital stewards, and ninety privates, and the ambulance companies were to have each six surgeons, seven hospital stewards, and one hundred and four privates.

The First Army Corps, commanded by Major-General Brooke, was encamped as a whole at Chickamauga from the latter part of May to the early part of July, little more than a month, and during that time it came nearer to reaching a condition of completeness than any other corps in the army. The amount of labor performed by these troops during this time was prodigious. Officers and men, all volunteers, worked day and night. In every case in which action was required it was necessary first to learn how to do it, and then to get it done. Quartermasters and commissaries, as well as medical officers, had to learn by experience, and their failures always made trouble for others as well as for themselves.

It is extremely interesting at this time to recall the words of Colonel Charles R. Greenleaf, spoken at the meeting of the Association of Military Surgeons held in St. Louis in 1892: "The practice of medicine and surgery in military life does not differ from their practice in civil life, save in the circumstances which surround them. The ever-present necessity with the medical officer is a comprehensive knowledge of military affairs. No other officer of the army is required to be individually familiar with the duties of every other military department in addition to his own, and yet this is the task which the military surgeon is called upon to perform. He wishes to be successful in his duties in the field."

"Imagine, if you will, that it were to-day at war with a foreign nation, and that the army of occupation in

the field of one hundred thousand men. That army is necessarily made up of members of the National Guard, for in time of war the regular army is but a nucleus or color guard of the fighting force. The administration of its medical departments consists of two thousand six hundred officers and men. Under ordinary circumstances five per cent. of the command, or five thousand men, are constantly sick or wounded, while after a battle the non-effective list is swelled to ten per cent., or ten thousand men. An accident of date of commission may make any one of you gentlemen the medical director of the force. What would you do after reporting to the commanding general and finding yourself face to face with the responsibilities of such a position?

"There is no time to learn and no one to advise with; each branch of the service has all it can do for itself, and you are practically alone, with the knowledge that each day of unaccustomed field life will, slowly but surely, add to your minimum of non-effective sick. You also know that there must quickly be a fight, involving the necessity for the care of an additional ten per cent. of wounded. The efficiency of that army, the care of its sick and wounded, and your own reputation, depend on your doing the right thing *then and there*.

"If advantage has been taken of the opportunity furnished to all surgeons of the National Guard for thoroughly learning all these comprehensive duties, you will find that familiarity with those of an adjutant will enable you immediately to establish order through a record system; to secure needful shelter by correctly preparing the necessary requisitions upon the quartermaster; to secure proper food in a similar manner from the commissary; to properly place and regulate the men of your hospital corps as any regimental or company commander would do; and finally, to preserve discipline, and so co-ordinate the several military systems that all shall work as one harmonious whole under the experience of your training as a commanding officer.

"Our system of property accountability is such that nothing can be had unless formal requisition is made for it, and the 'how to do it' is the *open sesame* to military as well as to any other success. No words of mine can possibly give you an idea of the confusion, the delay, the damage to property, and the loss of life that follow the work of the man who only knows 'how not to do it.'"

How far the warning conveyed in this prophetic picture was justified is now a matter of common knowledge. Yet I believe that it is a fair criticism to say that the colonel over-estimated the character of the experience to be gained in the National Guard. He says in another place, "We envy you of the National Guard your opportunities." For myself, I can say that I have served in the National Guard of Pennsylvania, which he particularly praised, for six years; that I have had the fortune to be surgeon of the regiment which has had more experience in active service, on duty at strike and riots, than any other in the United States—a total of one hundred

and twelve days since I have been with it, in addition to regular encampments; and yet when I found myself in the army, it appeared to me that I knew nothing at all.

I was not acquainted with the paper forms of my own department, much less with those of the quartermaster, commissary, and ordnance departments. I did not know that we would be taken from our regiments and have to command and care for men of the hospital corps in camps apart from those of other commands. I did not know that we would have to care for patients further than to obtain supplies of medicines and prescribe for them. I did not know where the duties of our department ended and the duties of other departments began.

We borrowed men in the National Guard from the companies, and the captains took care of them in all matters connected with quarters, rations, clothing, and pay.

The men, the canvas and cots, the wagons, the mules and ambulances, the kitchens, the cooks, the camp itself and all connected with it, everything in or about a hospital or an ambulance company, the drilling, detailing, and court-martialing of men, these and a thousand other things doctors have to busy themselves with in the United States service, and all simply incidentally and preparatory to taking care of the sick and injured.

In the First Army Corps, as I suppose in every other, the division hospitals were not organized and equipped for work before being thrown open, as one might say, to the public. They simply grew up in accordance with the necessities of the troops. These necessities of the men were from the start out of proportion to the preparations made for the care of them. Especially, there was no opportunity to train men for their duties as nurses, but anybody and everybody available had to be made use of as fast as they could be obtained. Those who could do the work were forced to work overtime. Those who could not had to do the best they could anyway.

The reserve hospital for the First Army Corps was not used for patients. It was built as a model, and a strong effort was made to use it as a drill ground and school for officers and men; but the demands of the sick, which exceeded all anticipations, together with the difficulty in recruiting men for the hospital corps, made it only a partial success.

By all surface indications, Chickamunga Park is an ideal place for a large encampment. Open fields alternate with open woods, in which delightful camps may be made. The valley of Chickamunga Creek is broad, shallow, and high above the neighboring valley of the Tennessee River. The soil is clay, with only the thinnest possible layer of loam upon it wherein the malarial germ may reside; and it is overlaid with limestone in which good water is had by drilling from forty to one hundred and twenty feet.

No one could have foreseen that new regiments, representing the robust health and vigor of the nation, each individual fresh from a close medical examination,

would show a considerable sick report from the beginning in such a wholesome locality. There was no typhoid there; but it appears to be true that certain regiments brought it with them from their State encampments, and that it reached the wells from the sinks, and in this way infected the camp.

The ambulance feature of the medical department at Chickamanga was begun in a more deliberate manner than were the hospitals.

The reserve company was formed first, and while its camp was made the depot for all supplies, it was built up in excess of its proper quota to be the parent of the ambulance companies of the divisions.

The total number of regimental surgeons in an army are three to a regiment, and these have to be divided up to fulfill the consolidated duties.

In three divisions there are eighty-one surgeons, forty-eight of whom are assigned to four hospitals and four ambulance companies, six to each. One remains with each of the twenty-seven regiments. His duties are those of a sanitary and hygienic officer. With a hospital steward and a private of the hospital corps he maintains a dispensary, but he is not expected to take care of any sick. Only six of the eighty-one are not especially assigned, which gives a small force available to fill vacancies and help out where needed.

It was the writer's fortune to be assigned to the task of organizing the Reserve Ambulance Company of the First Army Corps, an organization that will always have this degree of interest attached to it, that it was the first and only one of its kind to attain its full growth, all the others being cut off in the bud by the cessation of the war.

Hospitals may be busy in times of peace, but the existence of an ambulance company depends on the prospect of battle. An ambulance company, with a total of one hundred and twenty officers and men, has eighteen ambulances and sixteen wagons. All of the men are either mounted or entitled to ride. For duty in the field, it is accompanied by its corresponding hospital with its total of one hundred and six officers and men. The baggage, supplies, foods, and cooking outfit are loaded in the wagons. The medical officers of the hospital, as well as those of the ambulance company, are mounted, and each one has in attendance a hospital steward mounted on a mounted orderly, who carries a large pouch full of instruments and dressings. The men of the hospital are divided. Some remain with the canvas to set up, others go with the ambulances as litter bearers. If a company were operating by itself, this would be a small detachment of the medical force, and it would be subject to division into sections for hospitals, under orders of the division chief surgeon; but in case of a battle, in which the whole corps is engaged, then there would be available for duty four times the force. It would be expected that more than one division would be engaged at one time. It would have it even for a while

would do all the work, if it could. Then the reserve company would be at hand, and, in addition, the companies of the other two divisions, or such portions of them as might be spared, would strengthen the reserve, and there would be a possible total of seventy-two ambulances on the line.

The litter bearers would go actually on the line of fire and remain there. The ambulances would go as close as the practicability of the roads would permit, maintaining a regard for shelter when possible, and due precaution also against the possibility of capture.

The hospital would be far enough in the rear to be safe from the longest shell fire and behind the strongest fixed line. It is the chief aim of the medical department at the present date to get men away from the front as quickly as possible, and as far as possible, after they are wounded in action. For this reason its chief agent is the ambulance companies. Modern bullets as well as modern surgery combine to make this chief aim proper and successful. There is very little need of operative surgery on the firing line. Ambulance surgeons are supplied with the operative equipment, but it is mostly used in the rear. The first surgical requisite in any kind of a wound is a clean first dressing, which may be very quickly applied. Then a comfortable journey to the field hospital, where clean hands and quiet nerves with aseptic surgery will make good any injury that is not immediately or necessarily fatal.

It is a distinct advantage for the medical department that it is given its own transportation. It does not wait now for a battle to be decided, and for the needs of the well men to be supplied before it is able to accomplish its work.

Before the formation of ambulance companies, the ambulance wagons were under the control of the general officers, and depended on the quartermaster's department for motive power. The history of most of our great battles in the civil war is that ordnance, commissary, and quartermasters' wagons were brought up in advance of the ambulances, so that it was often several days before the wounded were taken of the field. Now, an ambulance is privileged to go right up to the firing line, and follow it back and forward, waiting to be used for its own proper humanitarian purpose, when it goes and returns at will, through all lines and at all times, as may be necessary.

This is in brief the theory of the ambulance service. It is enough to show that success depends on a thorough organization and discipline, and that it is well planned to render such efficient aid that no one would regret at any time unpatriotic, but each man of the service will be rapidly removed under proper conditions of transportation to the hospital in the rear.

There were a considerable number of ambulances in the First Army Corps, and it was expected that they would be put to use in the war. It was expected that they would be put to use in the war, to that extent were they.

But the writer was relieved of the command when his regiment was ordered away, in accordance with the policy of the department, which kept all of the volunteer officers and men as closely as possible with their own organizations; and it was his further good fortune to be in command of a brigade section of a division ambulance company which did have an opportunity—two opportunities—to demonstrate its usefulness in Porto Rico.

The story of the military operations on this island is short and well known.

The Sixteenth Pennsylvania Volunteers, as the advance of the First Brigade, First Division, First Army Corps, followed the Spanish garrison of Ponce until it made a stand and was captured at Coamo. The balance of the brigade, consisting of the Second and Third Wisconsin Volunteers with the Brooklyn troop of cavalry, companies of the Third, Fourth, and Fifth United States Light Artillery, General Ernst's staff and train, and the field hospital, remained at Ponce until the fact of the stand at Coamo was ascertained. Then it was all packed up, and at the end of three days of forced marching it passed ahead of the Sixteenth, and encamped within four miles of the village.

The ambulance company had an existence as a part of the brigade, and had a camp along with that of the field hospital, but it spent most of its time on the road, making daily calls on all of the different organizations, following them in their movements, and carrying back the sick to the hospital at Ponce.

When our brigade came in sight of Coamo the citizens appeared on the hilltops as though to see a circus. We had passed the Sixteenth about two miles behind. During the night it marched off to the left, by a bad mountain trail, to flank the Spaniards and reach their rear. Their outposts had already reconnoitered our ground up to a blockhouse occupied by the enemy, which was to be our point of attack.

Next morning our whole force, artillery, cavalry, and infantry, moved from camp along the roadway to a point in plain sight of the blockhouse and eighteen hundred yards from it. The field pieces were lined up in a meadow, and deliberately began target practice at the blockhouse. The range crossed a valley in which was a sugar refinery with its clustered outhouses and residences.

The air was still, the fields neatly kept and of a beautiful green color, the high hills shaded into blue at their tops, and the entire scene, in the bright but mild sunlight, was far more suggestive of joy than of warfare.

But immediately after the first shell had exploded in front of the blockhouse, and partly hid it from our view with white smoke, there came a reply with Mäusers, which sufficiently indicated the character of its occupant. We realized that we were under fire and that an engagement had commenced.

The Spanish fire was not effective. It soon grew feeble and ceased. The rapid succession of shells from our guns was too much for the few who were there. In

about twenty minutes the house was on fire, and they scattered away.

Then the cavalry and the Third Wisconsin moved ahead to the right. The Second Wisconsin in long double ranks swept slowly across the intervening fields to the plantation buildings, beyond them to the ford, its thin blue line glistening with steel slowly crossing the cultivated fields where only the corn-cutter's machete had gleamed in the morning suns of over four hundred years.

The artillery took up an advanced position, still directed to the blockhouse, in order to be ready in case that our skirmishers should find its trenches to be yet occupied.

The ambulance company had been left in a sheltered position around the last turn of the road. It was now divided. Two medical officers, with the drivers and orderlies, together with a dozen litter bearers, remained to follow with the ambulances. Taking with myself Lieutenant W. G. Johnston, the senior assistant surgeon, and sixteen litter bearers, we went ahead with the line. We followed the artillery to its new location, and set up a flag on a suitable slope in its rear to designate a first-aid station. A brief drill was indulged in at this point to make sure that every man knew his position and the duties pertaining to it; also the canteens and equipments were given a final inspection.

When our skirmishers could be seen about the ruins of the blockhouse, we left the artillery behind and overtook the Second Wisconsin at the river.

At this time no shots were being fired on our side, but we could hear tremendous volleying to our left and in front. It was evident that the Sixteenth was getting into the fight and having more of it than we were.

We crossed the river by a disused roadway. The difficulty was considerable and the passage slow, because the descent to the stream was by a very steep and rocky passage that was, in reality, only the bed of a water course. Large, smooth rocks were inclined at an angle like a toboggan slide, and were placed one after another like steps in a stairway. At the bottom was an accumulation of rocks that had been loosened above and bowled down by tropic storms. It was necessary to dismount and help our horses in order to get them down.

The firing in the front continued for three quarters of an hour, and made our boys, who had not yet fired a shot, exceedingly eager to get up to where something was going on. While crossing the river we were overtaken by General Ernst and staff, with whom was Major Snowden, the chief surgeon of the brigade, who joined us. We learned from him that the Spaniards had blown up the bridge on the main road, and that the ambulances would not be able to cross. I sent back a message to Lieutenant Grannis, who was in charge of the train, instructing him to find a crossing and follow us into town as rapidly as possible. I had no idea that he could cross where we did.

On regaining the road on the other side of the river, we found it cut across at intervals by rifle pits, which were deserted, showing that the force defending the town had abandoned their job on our side, and were uniting against the Pennsylvanians at the other end.

Lieutenant Grannis brought his ambulances to the river at the point already described. Here he met the commander of the battery, who told him that he had explored the bank in both directions, but could find no crossing. The commander of the battery was in a quandary. There appeared to be only one thing to be done, and the doctor agreed to try it. One after the other the ambulances were sent bumping down the rocks, and by hard work and good management they were all landed successfully at the bottom.

The major then suggested various things that he would be willing to submit to, in this world and the next, if his guns could not follow anywhere that ambulances could go. He set to work with his men and accomplished an equally successful descent. Thus occurred the first and only illustration in history of an ambulance company leading a field battery in an action.

We of the advance detachment did not wait for this, but moved along with the advance of the line. Our men passed most of the companies of the Wisconsin regiment, which was proceeding rather cautiously.

We were just behind the leading company when we heard good United States cheering coming from over the housetops of Coama, and knowing that there was now no further need for caution, we struck spur into our horses and galloped through the streets ahead of everybody.

We found Company "C," the advance of the Sixteenth, on the bridge on the opposite side of the town, and beyond them the other companies coming in with a party of captured Spaniards, numbering nearly two hundred. The officers of the first company told us that they had left some wounded men behind, and directed us up the river. Following up the river for perhaps a quarter of a mile we found several parties of stragglers, but none of them could direct us to the wounded; they did not know of any.

We returned to the main road to obtain better directions, and arrived there in time to see the general come up and receive the report of the commander of the regiment. This time we obtained a guide, who conducted us across the river on foot and up a steep hillside, down which the Americans had been descending when they were fired on by the Spaniards, who were ambushed at the bottom along the roadway on the other side of the ravine.

We found two wounded men, each of whom was attended by several of his friends. There were also there the chaplain of the regiment, Captain Lowry, and Dr. Stearns, of the hospital corps, who with the aid of a private had been doing the work of an ambulance crew. When we reached the top of the hill we could see our

litter squads, which had followed on foot, at work searching the ground below.

Those of the wounded who were able to walk had been helped off the field by their comrades. Others were already being borne away by local Red Cross bearers. There was a local branch of this organization in every town we came to. As there were less than a dozen of our regiment wounded, and some had already been removed, our bearers cleaned up the field on their first visit, and then they spent the remainder of the day dressing the minor injuries of the Spaniards and natives, among whom there were about forty cases.

As soon as the wounded reached the road and were made ready for transportation, the ambulances appeared and were ready to receive them. Not a moment had been lost. If the affair had happened in New York city the recovery and care of the wounded would not have been more expeditiously or more carefully accomplished.

The Americans and Spaniards were treated alike in the ambulances and in the hospital; but the next morning, after another careful dressing, the Americans were loaded again into the ambulances and carried back to Ponce, twenty-two miles away, thence to the harbor and the hospital ship *Relief*; so that before their comrades had finished picking up the scattered equipments on the hillside the injured in the battle had their wounds fully attended to, and were actually on their way to the United States.

Another item of the work of the medical department that is not generally understood is that from the time a soldier falls on the fighting line, or becomes sick, until he is returned to duty, or until he is discharged for disability, or furloughed home, or dies, he is absolutely in the care of and under the military command of the surgeon. The surgeon finds shelter, eats, and clothing, makes up his accounts for pay, keeps his record, and in fact does everything for him that his company commander would do if he were well. He is transferred on paper by his captain to the hospital, just as he would be if the transfer were from one regiment to another, and he remains on the books of the medical department until he is transferred back again. It is this arrangement that makes possible the long-distance transportation of the wounded.

This triumph for the system of the medical department, just described, was duplicated three days later, when another engagement took place at Aguacate, about four miles above Coama, where the Spaniards were entrenched in force on a mountain commanding the road to Albionito. Our outposts had been fired on, and the field guns were sent up to cover the new tactical position.

After giving up all hope of seeing the shells and fumes of the fight, about half past five, we learned that we were not concerned further in the fighting, so the enemy became a dead weight on our backs, and we broke through and over the mountain, and down the whole

afternoon until our ammunition was out, when our crafty foes returned to life and treated us to further liberal volleys, which were sent after us as far as they would reach while we went back to camp. During both of these times our ambulances were very busy.

The roadway at this point wound by sharp turns up the mountain, and at every bend there was an exposed and a sheltered stretch. In the sheltered places the infantry supports rested, and here the ambulances found safe stations. Our men at the guns were well screened by being located between undulations in a field below the road. They could elevate their pieces and fire drop shots effectively, while the enemy, replying mostly with Mausers, which have a very flat trajectory, could only shoot over their heads. Their field guns were only two in number, and of a slightly smaller calibre than ours, but these caused most of the casualties.

But the battery with its horses and drivers had to cross the exposed places in the roadway in making changes of position, and the usual bad marksmanship of the Spaniards was not noticeable on these occasions. They had evidently measured their distances and prepared themselves very deliberately for maintaining their position.

The ambulances with their drivers and orderlies moved up and down across these same places without regard to volleys. One surgeon, Dr. Geddings, had his horse shot under him. It was impossible to see any difference, so far as courage is concerned, between the volunteers of the hospital corps and the regulars of the artillery. Both did their duty with the utmost precision, and the way in which an ambulance, sent back to the hospital with a load, would return and be again within the zone of danger, was enough to put the non-combatant soldier forever on a parity with his brother in the ranks.

That night the peace protocol was proclaimed, and the armies rested where they were, with little white flags on all the hilltops between them.

In his field report General Ernst said: "The ambulance service under command of Major James Johnston was prompt and efficient."

Thus ended the fighting and the rescuing of fighters in Puerto Rico, our little detachment of an ambulance company being the only portion of a great system that enjoyed the opportunity of showing what could be done under fire.

Aporetic Scarlet Fever. *Rénon (Giornale internazionale delle scienze mediche, December 15th)* communicated last year to the *Société médicale des hôpitaux* the case of a male child affected with scarlatina in whom the temperature did not rise beyond 99.2° F. Nevertheless, it was a case of scarlatina and not of scarlatiniform erythema of toxic or infective origin. As in analogous cases, there existed some proportional difference between the pulse and the temperature. The case resolved without complications.

INVERTED RETINAL IMAGES AND INVERSION OF THE FIELDS OF VISION.*

By JAMES L. MINOR, M. D.,
MEMPHIS, TENN.

In the *New York Medical Journal* of November 5, 1898, I reported a case under the head of Learning to See at Forty: first with One Eye, and later with Both. The man had been blind from birth, and at the age of forty acquired his sight through operations at my hands. I give in detail the tests to which he was subjected from the time he was allowed to use his eyes until the sense of sight was fairly well established.

Since the case was published I have received a few letters from physicians, in which not only an interest in the article was expressed, but a desire to know whether objects looked at and visual fields were inverted; for there are some physiologists who teach that we see things upside down, because inverted images of objects looked at are formed on the retina, and because the lower half of the retina is concerned in seeing things above the horizontal—the left half of the retina objects on the right side of the median line, etc.

They say that objects are seen, and appear to be, upside down, to infants and to others, when the function of vision is first exercised, and that only after the sense of touch has been so cultivated as to demonstrate that it gives the real and correct relation of objects do we have things seen appear to us in their natural position and relations—by a process called *reversion*. They say that without the sense of touch things would always appear upside down through the sense of sight, and that if a person possessed of the sense of touch, but not with nor ever having had that of sight, be made to see, objects seen would appear upside down, until by cultivation this process of reversion established the proper relation between the senses of touch and vision. My patient was in this latter condition, and it was supposed that his experiences would throw some light upon this subject—one alike perplexing to the teacher and a stumbling-block to the student. There was neither inversion of object nor of field of vision with him.

The first object he saw with distinctive shape was correctly appreciated (a glass goblet, the outlines of which he mapped out by movements of the hand before touching). And the first object he saw—a round ball—he reached out and touched with little hesitation, though it was two feet off and about 45° below the level of his eyes, and the upper half of the retina was concerned in getting his first glance of it.

It seems to me that this is as it should have been, for the sense of direction of an irritant is the same for the retina that it is for any other nerve of the body; it is referred back to the same direction whence it came,

* Read before the Tri-State Medical Association, at Memphis, Tenn., December 24, 1898.

opposite the point of impact. For instance, if the fingers be extended and the hand held palm upward, and any part of the palm or palmar surface of the fingers be irritated, the force producing it will be recognized as having come from above; or, if the palm be down, the force will have come up, etc.

Now, if the fingers be curved up somewhat on the palm, so as to make a sort of cuplike cavity, the concavity of which will be the palmar surface of the hand and fingers, the forearm being vertical, the wrist bent back, so as to direct the concavity forward, we will have a palmar surface arranged on the plan of the retina.

The lower half of the cavity facing upward will be the palm of the hand, irritation of which must come from above; the upper half of the cavity, the palmar surface of the fingers facing downward, irritation of which must come from below. The retina is just such a cup-shaped nervous expansion, with its perceptive elements facing the concave surface, and it is as natural that objects in the field of vision should excite correspondingly opposite portions of the retina as it is necessary for the inverted image of an object to be formed on that part of the concavity of the retina perceiving it.

An error has been fallen into in confounding the inverted image of the object formed on the retina—a simple phenomenon of refraction, which may be visible to the observer but not to the subject—with the recognition of the object by the brain, and its projection to its proper position in space. And the so-called reversion of the field of vision—as compared with the sense of touch—differs in no material way from nerve action elsewhere. The fact that my patient had perception of light before he was operated upon may be cited as a possible explanation of his correct interpretation of the field of vision, but the explanation which I have given of retinal perception and projection makes such inference unnecessary.

COMBINATIONS OF SYNERGISTS IN REDUCED DOSES.

By B. SCHEINKMAN, M.D.

As the result of considerable and careful observation I find that the method of combining therapeutically analogous drugs in practically minute doses, so as to constitute in the aggregate a moderate therapeutic dose, is by far superior in effect to a similar dose of any individual one of its constituents administered alone. Especially is this true with the members of the coal tar and urea and with most of the alkaloids. It seems a truism when in combination, while their respective characteristic therapeutic properties are acting conjointly in perfect harmony, their toxic properties—and such are, as a rule, possessed by nearly all of them, though there are

not usually analogous in character—are either individually too insignificant, being in small doses, or they neutralize one another more or less effectively. Thus, for example, we are all well familiar with the depressing effects upon the heart and circulation frequently observed after even moderate therapeutic doses of antipyrine, phenacetine, antifibrine, etc., as well as with the more or less severe symptoms following a moderate dose of quinine or caffeine, to say nothing of their occasional uncertainty in action. We also know of the almost absolute uselessness or inactivity of the above-mentioned drugs as therapeutic agents when administered individually in minute doses; while, on the other hand, by combining these drugs in practically very small doses, so as to constitute in their aggregate a moderate dose, I find that their respective individual characteristics are greatly modified and an almost new therapeutic action is produced, which, while being more powerful and more certain in its therapeutic effects, is completely lacking in any of the toxic properties possessed by any one of its constituents. The following prescription as a type will illustrate a combination which I have been in the habit of giving for a number of years with the most gratifying and happy results for antipyretic, analgetic, antiperiodic, and antiseptic purposes, results so striking and so positive as to lead me to the conclusion that it is the most excellent, the most harmless, and the most certain method of administration of these drugs for the above-mentioned purposes; reducing temperature and alleviating pain much more readily, more certainly, and more safely, than any one of them individually, and above all being entirely free from the unpleasant symptoms frequently following a similar dose of any individual one of them. The following is recommended as the dose for an adult:

R Antipyrine,	} of each ½ drachm;
Phenacetine,	
Quinine sulphate,	
Powdered ginger,	
Caffeine citrate	15 grains.

M. Divide into fifteen capsules.

S.: One every two hours.

In the case of children a proportionate dose is given in a mixture, the vehicle being equal parts of syrup of verba santa and chlor glycyrrhizæ, a composition which disguises effectively the latter taste.

As can be readily seen from the foregoing prescription, the ingredients, although employed individually in very small doses, are yet wonderfully effective in their conjoint cooperative action toward the reduction of temperature and; while their toxic properties, on the other hand, are both so infinitesimal that they do not affect one another. In combining these drugs, therefore, we evidently obtain their purely beneficial or desirable effects minus their objectionable or deleterious properties, and hence the advantages I am attributing to this method over others.

Another point of importance which I am sufficiently warranted in alleging for the above combination particularly, is that it possesses decided prophylactic power against many diseases of microbic origin, especially against the streptococcus. I am supported in this view by numerous cases, in which this combination has acted prophylactically, where sepsis would appear to have been inevitable, and by having adopted the rule of administering the above combination in almost every puerperal case, whether at term or premature. I have been so fortunate as never to encounter a case of sepsis in spite of a course of almost ten years of active obstetrical practice under exceedingly unfavorable conditions and surroundings, or rather under conditions highly favorable to the production of sepsis. Neither have I ever observed the slightest injurious effects or unpleasantness to the patient from its administration.

With about the same gratifying results I have made use of this combination in a number of other affections characterized by pyrexia and neuralgia, such as acute articular and muscular rheumatism, acute pneumonia, erysipelas, and malarial affections, also in typhoid fever, although with less marked benefit in that disease.

The method of administering drugs in combination is by no means new, nor do I claim any originality or priority for the particular combination alluded to, since for the main part of it I am greatly indebted to one of my learned and highly esteemed teachers, Dr. W. H. Thomson, who has always been one of the most ardent advocates of combining similar drugs with a like purpose. What I do state, however, is the fact that so far as I have observed, the method, excellent as it is, is very seldom, if at all, practised by the profession in the manner and with the object above described. This method must not, however, be confounded with the so-called "dosimetric system," the main feature of which is the administration of individual drugs, separately or conjointly, in exceedingly minute doses at very short intervals, with the object of impressing the system with their cumulative effects. This object is entirely different from the one to which I am alluding.

An incident which has lately occurred to me is well illustrative of the unpopularity of this method of treatment with the modern physician. A case that had been diagnosed as acute articular rheumatism was treated by several physicians, including myself (the patient being my sister), in the usual routine way with the salicylates, etc., but unfortunately without the slightest effect on either the temperature or the pain. On one occasion, when the patient complained to me bitterly of feeling much worse under the treatment, and on finding her temperature and other symptoms persisting in spite of the routine course, I decided upon my favorite prescription, in the absence of my colleague, who could not be found at the time. On his arrival, however, somewhat later, and on learning of my prescription, which was as yet at the druggist's, he manifested surprise at

its ridiculousness; in fact, his surprise was so great that after a preliminary conference with the druggist, they both came to the final conclusion "that the poor fellow [the author of the prescription] must have become either mentally unbalanced or be the victim of gross professional ignorance"; and having strongly forbidden the patient to take the medicine, my friend assumed the attitude, as I was informed, of having been "in time to save the patient's life." Considering the great popularity these drugs have always enjoyed as antirheumatics by the profession at large, and also the opinions expressed by such prominent men as Sée, Dujardin-Beaumez, Fraenkel, and others, who have claimed for antipyrine and phenacetine a place not only as specifics in acute articular rheumatism, but also as preventives of the heart complications so common in this affection, and which popularity could hardly escape the notice of a modern physician, it appears to me that it is not the drugs *per se* so much as the combination of these drugs in small doses that puzzled and alarmed my friends.

As to the *modus operandi* of this combination *versus* other methods, my belief is based upon the following common-sense theory. Rise of temperature, pain, cough, irritability, etc., are symptoms certainly indicative of some abnormal condition or process somewhere in the economy, otherwise the symptoms would have to be regarded as normal physiological phenomena, and as consequently requiring no treatment. Hence, in speaking of functional affections causing any one of the above symptoms, we must necessarily admit that the term "functional" is being used in a comparative sense only, either to denote our ignorance as to the distinct pathology of a given affection and in contradistinction to affections of known pathology, or that the morbid condition is of a slight and easily removable nature. Taking, for instance, trigeminal neuralgia as illustrative of a type of functional affections, and granting it a fair and intelligent consideration, we shall soon come to the conclusion that there is something morbid or abnormal going on either in the immediate neighborhood or remote from it, which gives rise to this local disturbance; that at least there is some cause productive of these symptoms; for it must be borne in mind that a symptom must be either the result of an irritation upon the nervous system produced by some pathological process, or the means and efforts that are employed by Nature to rid itself of a morbid process or condition by increased cellular activity or metamorphosis, brought about by such morbid condition acting as an irritant upon the vasomotor system or other nerves, and giving rise to either motor, vasomotor, or sensory disturbances. Hence it clearly follows that anything which would check or alleviate a symptom could only do so by either paralyzing or suspending the physiological sensibility and conductivity of the nervous system, while allowing the morbid process to go on doing its mischief, as would be the case with an anæsthetic, or by checking, or at least con-

teracting in some manner the morbid process itself that is giving rise to the symptoms so as either to check or to counteract its virulence, and consequently to act as an organic medicine. Therefore, in speaking of an analgetic, anodyne, sedative, etc., we merely express by it our ignorance of its real nature, and the term is in this regard also closely related to the term "functional."

It is therefore obvious that any remedial agent which, being not an anesthetic, is yet reputed to possess analgetic, anodyne, or antipyretic properties, should necessarily be regarded as a real curative, or, as we sometimes call it, organic remedy in any affection, whether organic or functional, or, in other words, whether of known or unknown pathogeny.

It should be borne in mind, however, that by curative is not necessarily implied also reparative, for in the majority of instances the checking of the process alone suffices to effect a cure, leaving to Nature the repair of the already existing lesions.

Although, as previously remarked, some symptoms, such as fever, cough, diarrhœa, vomiting, etc., are often the means used by Nature to rid herself of a certain morbid condition or process, and consequently by checking such symptoms we are in danger of depriving Nature of her means of defense, which would appear to be highly detrimental to our purpose unless we attack the disease itself, we are also, fortunately for my theory, well aware of the fact that the means thus used by Nature are often not only incorrect and inefficient, but very frequently more destructive in character than the original disease. Consequently, we are frequently called upon to guide and correct Nature in her efforts, so that in checking any such symptom by any appropriate remedial agent, with very rare exceptions only good results and no harm should ensue, inasmuch as we are counteracting harmful symptoms. In cases, however, where harm is discovered to arise from such interference with a given symptom, as sometimes happens, I am convinced that in the majority of these cases the harm will be found to be due, not to the counteraction of the symptoms, but to the given agent, which, as already said, usually possesses also properties other than its therapeutic ones, and which, when given in a sufficient dose for its therapeutic effects, exercises at the same time also its full deleterious influences in other directions, frequently necessitating its entire discontinuance.

We may instance the case of antipyrine, which, when administered in its antipyretic doses in fevers from any cause, we are frequently obliged to discontinue, owing to its well-known depressing effect upon the heart and other unpleasant symptoms, but certainly not on account of its antipyretic effect having done any harm, in having counteracted or possibly deprived Nature of its means of defense. Indeed, I have never seen an instance where an effective antipyretic has done anything but good in pyrexia from any cause, save from other harmful or toxic properties possessed by nearly all of these agents which

exert also simultaneously with their antipyretic effects toxic influences in other directions, thus rendering them often unfit for our purpose. The combination method offers itself as an excellent expedient in disposing of these difficulties; for, by combining several of them possessing analogous antipyretic properties in small doses, we obtain the conjoint benefit of their pure antipyretic effect alone, their toxic properties being either individually too insignificant, or mutually counteracting, as can be seen from the above prescription. They thus doubtlessly exercise a curative action upon the disease itself, or at least effectively antagonize symptoms which in the majority of cases play the main rôle in the disease, and are very often the direct cause of death. In fact, death is seldom due directly to the disease *per se*, but rather to the immediate effects of the symptoms, before the disease has done any serious mischief. Indeed, we may quite humorously, though often very truly, express ourselves, that the majority of our deaths are only functional in character, or that "there is nothing serious in X's death; it is only due to shock or to some functional heart failure as a result of a certain irritation upon the vagus or cardiac ganglia." Hence the checking or counteracting of symptoms effectively by any remedial agent, I consider not only always indicated and beneficial, but frequently even life-saving, regardless of the pathological conditions which may be at the bottom of them, provided we eliminate the toxic effects simultaneously produced by the same agents; and the only way to accomplish this end is, as it seems to me, by the combination method.

As regards symptoms which are considered essential and do prove efficient in the efforts of Nature to resist or eliminate disease, and in which interference would prove injurious indeed—*e.g.*, in the case of vomiting caused by the irritation of the stomach due to some corrosive or offending material ingested, or a cough due to excessive exudation into the bronchial tubes, or a foreign body in the trachea and the like, I do not consider it necessary to say that the physician is intelligent enough to allow Nature full play in her efforts and means to help herself.

AN OPEN SAFETY PIN LODGED IN THE CARDIAC END OF THE STOMACH FOR SEVEN DAYS.

ITS SUCCESSFUL REMOVAL BY GASTROTOMY

BY WILLIAM PETRY, M. D.

RESIDENT PHYSICIAN AT THE HOSPITAL OF ST. BARBARA, NEWARK, N. J.

Mrs. S., aged thirty-three years, while attending to the nursing of her infant during the night of November 29, 1898, placed an open safety pin, several at over an inch in length, in her mouth, and awoke the following morning with a feeling of soreness in her throat, extending down to a point opposite the xiphoid or costo-sternal junction. She concluded that the pin had swallowed the pin and promptly took an emetic, which emptied her stomach but failed to remove the apparent cause of trouble.

The pain behind the right sternal border increased

in severity, and there being some doubt about her having swallowed the pin, she was treated for several days by her family physician, Dr. Gaston, of Somerville, N. J.

Four days after the accident had occurred, during which time the patient was unable to swallow any solids, and very little liquid food, the doctor brought the patient to Dr. Edward J. Ill, of this city, who began search for the pin by the following ingenious method, which in this case proved highly satisfactory and again demonstrated the possibility of locating foreign objects in the human body without the aid of the Röntgen rays. The tip of an ordinary œsophageal bougie was coated with wax, and the instrument passed into the stomach, contact with the teeth being carefully avoided. The point on the bougie opposite the incisor teeth, after the instrument had been fully inserted, was marked. After withdrawing the bougie a distinct scratch was detected on the wax covering, the upper extremity of the scratch being fourteen inches and a half below the point on the bougie above noted—in other words, the normal distance between the teeth and the cardiac orifice. This proved the location of a foreign body at or near the cardiac orifice. The experiment was repeated on three successive days with the same result.

The patient was prepared for gastrotony. The intestinal tract was thoroughly emptied by repeated doses of calomel, and no food allowed by mouth during the twenty-four hours preceding the time set for operation. During the night preceding operation, however, the patient was given in divided doses one quart of warm water, in which one teaspoonful of sodium bicarbonate had been dissolved. On December 5, 1898, seven days after the accident, the abdomen was opened by a median incision in the epigastrium, the stomach was drawn into the wound and opened by a transverse incision halfway between the lesser and greater curvatures. An attempt to locate the pin by means of the index finger failed; the stomach wound was increased to nine cubic centimetres in length, so that the whole hand could be inserted, after which the pin was found just above the cardiac orifice, the point of the pin being directed downward.

The operator, Dr. Ill, found that, contrary to the teachings of anatomists, the opening of the œsophagus into the stomach in this case was to the right of the spinal column and aorta, which accounted for the impossibility of reaching the orifice by the index finger. The pin was grasped near its rounded end with long artery forceps, reversed, while the finger covered its point, and easily removed. The wound in the stomach was closed by a double row of interrupted silk Lembert sutures and the abdomen closed without drainage. For five days after the operation the patient was nourished by enemata, and made an uncomplicated recovery without the slightest symptom of inflammation or gastric irritation.

So far as the writer of this is aware, but two cases of removal of foreign bodies from the lower end of the œsophagus by gastrotony have been reported, the first by Dr. M. H. Richardson in the *Lancet*, October 8, 1887, and the second by Dr. W. T. Bull in the *New York Medical Journal*, October 29, 1887. The present case is, therefore, sufficiently uncommon to justify its publication. Prof. or Howard A. Kelly has taught the use of the wax covered urethral bougie in the search for renal calculus. Dr. Ill has carried out a similar idea in the above case with absolute certainty of detecting and locating the foreign body. It must always be borne in

mind that the cardiac orifice is fourteen inches and a half below the incisor teeth in the vast majority of adults.

The woman evidently swallowed the pin with the rounded or spring end first, but before reaching the stomach it was reversed by the effort of vomiting, and its point became lodged in the cardiac end of the stomach.

It is apparent that the stomach tolerates so large a wound as nine cubic centimetres in length very well.

In connection with this case it is interesting to note the displacement of cardiac orifices to the right instead of left of aorta, as described in the books. It was far to the right of the spine, and the introduction of the entire hand was necessary to locate it. This displacement explained the location of pain behind the right sternal border.

Therapeutical Notes.

An Enema for Urticaria.—In the *Clinica moderna* for December 21st we find the statement that in severe cases of urticaria benefit has been found to follow the use, four or five times a day, of an enema having the following composition:

℞ Sodium bicarbonate 300 grains;
Laudanum 30 drops;
Boiled water 7,500 grains.

M. As improvement takes place, the amount of sodium bicarbonate may be reduced gradually to seventy-five grains.

Pastilles for Fœtid Breath.—The *Journal de médecine de Paris* gives the following:

℞ Powdered coffee 675 grains;
Vegetable charcoal 225 "
Powdered sugar 225 "
Vanilla 225 "
Mucilage of Senegal gum q. s.

M.

Make into pastilles, each containing fifteen grains. Five or six may be taken daily.

Iodine in the Treatment of Infantile Gastro-enteritis.—Bizine (*Semaine médicale; Revue des maladies de l'enfance*, January) reports particularly favorable results from the use of this mixture:

℞ Emulsion of castor oil 6 ounces;
Oil of peppermint 3 drops;
Oil of cloves 5 "
Tincture of iodine 10 "
Chloroform 2 "

M. S.: A teaspoonful every hour. The mixture should be kept on ice, to prevent decomposition. One bottle is usually enough, but if after that has been taken there is still a little diarrhoea, ten grains of iodized starch may be divided into six doses, one to be taken twice a day.

An Ointment for Chapped Hands.—The *Journal des praticiens* for December 31st credits the following formula to Comby:

℞ Menthol 1 part;
Salol 2 parts;
Olive oil 10 "
Lanolin 30 "

M.

THE
NEW YORK MEDICAL JOURNAL,
A Weekly Review of Medicine.

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Edited by
FRANK P. FOSTER, M. D.

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TEMPORARY GLYCOSURIA AND ALBUMINURIA FROM
THE LIFE-INSURANCE POINT OF VIEW.

MUCH has been written upon this subject, but we do not remember to have seen a better presentation of it of late than is to be found in the December number of the *American Practitioner and News*, in the report of a meeting of the Louisville Medico-chirurgical Society. Transitory glycosuria was the subject formally under discussion, but temporary albuminuria also was considered. A report presented by Dr. Dabney reminded Dr. Cecil of the case of a short, fat, and rather florid woman, forty-seven years old, whom in an examination for life insurance he had found perfectly healthy, save for her urine containing a small amount of sugar, estimated roughly at one third of one per cent. The amount of urine was not increased and its specific gravity was only 1.019. There was neither the thirst nor the appetite of diabetes, and the speaker, thinking the glycosuria might be transitory, suggested that her application be held in abeyance. A second examination, made some days later, showed that there was still sugar in the urine. Dr. Anderson cited some arguments that he had shortly before heard brought forward by Dr. Ochterlony to the effect that one could not make a diagnosis of diabetes simply by the presence of sugar in the urine; there must be some other manifestation, such as thirst, polyuria, or emaciation. The same was true of albuminuria as a sign of kidney disease.

Dr. Bailey, an examiner for life insurance, stated that he could not ask any company that he represented to insure a person whose urine showed either albumin or sugar. While it was recognized, he said, that albuminuria or glycosuria might be transitory, he asked how one could know that in a given case it was transitory, unless repeated examinations were made and the abnormal condition was found only once. Almost any healthy person, he remarked, might show albumin in the urine after an unusual amount of bicycle riding, yet even in such cases it was sometimes very difficult to decide whether the albuminuria was transitory or not, and in the case of a man with such a history he would not ask a company to accept the risk. He did not feel free to recommend a person for insurance if at the time of

the examination the urine contained either albumin or sugar, no matter what the circumstances were. The best that he could bring himself to do was to ask that the application be "held up." We take it that this is the view taken by the great majority of capable and conscientious examiners and by the conservative companies also.

THE EVIL OF CLUB PRACTICE.

If we are to escape in this country such a growth of club practice as afflicts our professional brethren in certain European communities, decided steps must be taken before that particularly despicable form of the practice of medicine has taken root, as it is sure to do if we content ourselves much longer with the "expectant treatment." We are rejoiced to see, therefore, that at least one influential medical organization has taken the matter in hand in a way that promises to do much toward strangling the evil.

We have in mind certain action that was recently taken by the Syracuse Academy of Medicine. On December 1st a proposition signed by thirty-three members was laid before the academy. The purport of it was to amend the constitution by so changing one of its sections that it should read as follows: "This academy shall be composed of resident and non-resident fellows who are regular practitioners of medicine and who have been in active practice for at least two years and who agree not to engage, by written or verbal contract, to attend medically or surgically by the year, by the month, or for any specified time, the members of any lodge, club, sick-benefit society, or insurance society, or the employees of any contractor or commercial house, at so much *per capita* or for any specified sum. This shall not be construed to mean the care by contract of any ward or convict of the city, county, or State;" also by adding the following section to the by-laws: "Any fellow who violates any of the provisions of Section 1, Article II, of the constitution [the one proposed to be amended] shall be heard by the council in his own behalf after charges have been preferred, and if such charges are sustained he shall be expelled." Recently, after the necessary formalities, these proposed changes were adopted almost unanimously.

If there are but one hundred at Syracuse competent practitioners, would it not be better to have a club practice, and we are confident that such an action would not have been necessary if the majority of their brethren in the State had taken the Syracuse Academy of Medicine as a model, and had endeavored to carry with them the same principles of association with the

community and lead them to mend their ways. It ought also to deter younger men who might otherwise be led astray. If it has these results in Syracuse, it would no doubt have them elsewhere, and we hope that the academy's example will be followed widely. The evil of club practice must be eradicated.

MINOR PARAGRAPHS.

"EMBALMED" BEEF.

ANOTHER yellow-journal bubble seems to have collapsed. An investigating board, one thoroughly desirous of getting at the facts, has come to the conclusion that there was nothing about the canned beef furnished to the army during the late war to justify its being called "embalmed." Soldiers will have their jokes, however, and probably some of the beef was not inviting. We believe that this was due to some imperfection in canning that may yet be discovered and in the future avoided. The purveyors were in no way to blame.

MILITARY DOCTORS.

THE *British Medical Journal* for January 21st cites Lord Wolseley as having said more than once that medical officers are not soldiers, and mentions the case of General J. Frédéric Canonge, now commanding the fifteenth French army corps at Marseilles, as an instance to the contrary, he having received his M. D. degree on the same day that he was promoted to the "combatant" rank of a lieutenant. The motto of his thesis, "*Miles sum, militis nihil a me alienum puto*," was felicitous. We congratulate France on possessing such an excellent example of the fact that a medical officer may be a good soldier; but with General Leonard Wood, M. D., in view we can do so without inordinate envy.

INDIRECT ATAVISM IN THE TRANSMISSION OF TUBERCULOSIS.

WEBER, in an article on The Heredity of Tuberculosis (*Journal des praticiens*, January 21st), cites a case reported by Boungies as an example of "oblique heredity," which seems to be the same thing as Sedgwick's indirect atavism. A young girl was seduced and gave birth to a child. Both the child and its father soon died of tuberculous disease. Then the girl, herself strong and healthy, married a healthy and vigorous man. Four children were born to them. The first, second, and third died of tuberculous meningitis. The fourth, a girl, was born healthy, grew up, and married a healthy man. All the children that she bore were affected with tuberculous glands.

A CASE OF MALTA FEVER IN PHILADELPHIA.

In the *Proceedings of the Pathological Society of Philadelphia* for February 1st Dr. J. H. Musser and Dr. J. Sailer report the case of an army officer who appears to have contracted the disease in Puerto Rico. Malarial plasmodia were frequently sought for in his blood, but never found. A culture of the *Micrococcus melitensis* gave an agglutimative reaction with the patient's blood. The author intimates that the name of *febris undulans*, suggested by Hachez, is the most appropriate for Malta

fever, which, they remark, occurs in Malta, in Naples, at Gibraltar, on the northern coast of Africa, in India, and possibly in Hongkong and along the Danube. So far as they know, it has not before been observed in the United States.

HÆMORRHAGE FROM ŒSOPHAGEAL VARICES IN LATENT CIRRHOSIS OF THE LIVER.

At a recent meeting of the Paris *Société anatomique* (*Gazette hebdomadaire de médecine et de chirurgie*, January 26th) Marmasse showed the liver and the œsophagus of a man who had had hæmatemesis without presenting at the time any sign of cirrhosis. Subsequently, however, cirrhosis of the liver was recognizable clinically. After his death three varicose swellings were found in the lower portion of his œsophagus, and there was an erosion, plugged with a clot, at the summit of each dilated venule.

THE REGULATION OF THE SALE OF POISONS IN ILLINOIS.

On January 31st Mr. Kettering introduced into the lower house of the Illinois legislature a bill to regulate and restrict the sale of compounds or preparations of drugs or chemicals which may be poisonous or deleterious to health. The bill seems to us rather exacting in some respects, but its general features appear to be wholesome.

THE COLORADO MEDICAL JOURNAL.

We wish to congratulate our esteemed Denver contemporary on the improved appearance of its January number. The improvement is not one of appearance only; the *Journal* contains more matter than before, and the quality of its contents is excellent.

ITEMS.

The New York Academy of Medicine.—At the last stated meeting, on Thursday evening, the 16th inst., Dr. Herman M. Biggs read a paper on The Serum Treatment and its Results, which was discussed by Dr. Henry Koplik, Dr. L. Emmett Holt, Dr. W. H. Park, Dr. J. Winters Braman, Dr. A. Lambert, and Dr. W. R. Pryor.

At the next meeting of the Section in Ophthalmology and Otology, on Monday evening, the 20th inst., the following cases will be presented: Purulent cystitis and pemphigus of the conjunctiva, by Dr. H. Knapp; partial atrophy of the optic nerves due to hæmorrhage from the uterus, by Dr. John E. Weeks; the final result of plastic operations for epithelioma of the inner canthus, and the result of operation for symblepharon, by Dr. J. H. Claiborne. Dr. Ward A. Holden will read a paper on the Pathology of the Amblyopia following Excessive Hæmorrhage, and of that following the Ingestion of Wood Alcohol as determined experimentally.

At the next meeting of the Section in Medicine, on Tuesday evening, the 21st inst., the following papers will be presented for discussion: Hydrophobia and its Preventive Treatment; an Analysis of Some Cases, by Dr. Pollen Cahot; and Cases of Hydrophobia in Animals, by Dr. S. K. Johnson and Dr. H. D. Gill.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 22d inst., Dr. Jonathan Wright will read a paper entitled Remarks on the Etiology of Nasal Polypi, which is to be

discussed by Dr. Henry L. Swain, of New Haven, and Dr. J. E. Newcomb. There will be a continuation of the discussion on Dr. Freudenthal's paper on the Treatment of Dysphagia and Cough, especially in Tuberculosis. Cases will be reported by Dr. Joseph W. Gleitsmann.

At the next meeting of the Section in Obstetrics and Gynaecology, on Thursday evening, the 23d inst., the following papers will be presented for discussion: A Report of a Case treated by Unusually Large Saline Infusion, by Dr. J. Riddle Goffe; and Puerperal Infection, by Dr. Julius Rosenberg. Specimens and instruments will be exhibited.

At the next meeting of the Section in Neurology and Psychiatry, on Friday evening, the 24th inst., the following papers will be read: The Pathology of Paralysis Agitans, by Dr. Charles L. Dana; and Tetanoid Seizures in Epilepsy, by Dr. L. Pierce Clark.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, and cholera were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending February 11, 1899:

Small pox—United States.

San Francisco, Cal.,	Jan. 31,	2 cases; one a railroad employee from Colorado, one a leper in pest house.
Denver, Col.,	Jan. 7-14,	1 case.
Washington, D. C.,	Jan. 31,	2 cases.
Indianapolis, Ind.,	Jan. 21,	4 "
Louisville, Ky.,	Dec. 20-Feb. 8,	47 "
Detroit, Mich.,	Jan. 21-Feb. 1,	7 "
Omaha, Neb.,	Jan. 22-28,	3 "
New York, N. Y.,	Jan. 28-Feb. 4,	1 case.
Cincinnati, Ohio,	Jan. 21-Feb. 3,	49 cases.
Cleveland, Ohio,	Jan. 21-28,	1 case.
On steam-ship <i>Taconon</i> at Louisville, Ky.,	Jan. 20,	3 cases.

Small pox—Foreign.

Buenos Ayres, Argentina,	Nov. 1-20,	5 deaths.
Bahia, Brazil,	Dec. 17-Jan. 7,	56 cases, 6 "
Rio de Janeiro, Brazil,	Dec. 16-23,	21 "
London, England,	Jan. 7-14,	1 case.
Mexico City, Mexico,	Jan. 22-29,	5 cases, 3 "
Monterrey, Mexico,	Dec. 29-Jan. 5,	2 "
Moscow, Russia,	Jan. 7-14,	3 "
Odessa, Russia,	Jan. 7-14,	1 death.
St. Petersburg, Russia,	Jan. 1-14,	7 "

Yellow Fever.

Bahia, Brazil,	Dec. 21-Jan. 7,	2 cases, 1 death.
Rio de Janeiro, Brazil,	Dec. 16-24,	7 "
Chihuahua, Mexico,	Jan. 22-28,	2 "

Cholera.

Calcutta, India,	Dec. 17-21,	21 deaths.
Madras, India,	Dec. 10-16,	6 "

The Southeast Kansas Medical Society.—The quarterly meeting will be held in Fort Scott, on Tuesday, March 7th, under the presidency of Dr. P. W. Ramey, of Oswego. The programme contains the following titles: Pneumonia, by Dr. M. Coryell, of Cairo; Diphtheria in a Liberator of the Corns, by Dr. E. B. Telford, of Kansas City; Cystitis, by Dr. J. B. Carver, of Fort Scott; Rectal Fistula, by Dr. George E. Cole, of Girard; Diphtheria, by Dr. L. R. Sellers, of Fort Scott; Post-nasal Catarrh, by Dr. M. E. Jarrett, of Fort Scott; Injuries of the Elbow Joint, by Dr. J. W. Parsons, of Litchfield; Disease of the Gall Bladder, by Dr. J. L. Jewell, of Moran; Disease of the Rectum, by Dr. J. B. Anderson, of Chetopa; Pharynx, by Dr. C. S. Benson, of Barthol; Compunctivitis, by Dr. A. C. Granger, of Pittsburgh; Granular Compunctivitis, by Dr. J. W. Parsons, of Parsons; Gonorrhoea, by Dr. George S. Liggett, of Oswego; and Moral Therapeutics, by the Rev. J. J. Purcell, of Parsons.

The Illinois State Board of Health.—At the last election, held on January 17th, the following-named physicians were elected officers and members for 1899: Dr. C. B. Johnson, of Champaign, president; Dr. R. F. Bennett, of Litchfield, treasurer; Dr. J. A. Egan, of Springfield, secretary and executive officer. Dr. J. C. Sullivan, of Cairo; Dr. L. Adelsberger, of Waterloo; Dr. Florence W. Hunt, of Chicago; Dr. P. H. Wessel, of Moline; and Dr. M. Meyerovitz, of Chicago.

A New Obstetrical Journal.—*Obstetrics* is the title of a new monthly of sixty pages edited by Dr. Edward A. Ayers and published in New York. The first number, for January, 1899, has a handsome appearance.

A New Central American Medical Journal.—We have received the first number of the *Boletín de la Sociedad de Medicina y Cirugía de Panamá*, a monthly periodical of eighteen pages, edited by Dr. Julio Qeaza and Dr. José E. Calvo.

A New Kansas Monthly.—Dr. William E. McVey, formerly of the *Kansas Medical Journal*, the publication of which has been discontinued, has brought out the first number of the *Medical Monograph*, a monthly of about one hundred and fifty pages. It is notable for the fact that all but one of its original articles, nine in number, relate to diseases of the liver. We infer that the policy of grouping articles in this manner is to be a distinctive feature of the new journal. It is published in Topeka.

The Society of Medical Jurisprudence.—The special order for the meeting of Tuesday evening, February 14th, was a paper on The Medical and Legal Aspects of Hysteria Induced by Injury, by Dr. Pearce Bailey.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 11th inst., Dr. G. Wiley Broome presented a Preliminary Report on the Effects of Ligating the Dorsal Vein of the Penis for Functional Impotence.

The New York State Medical Association.—The Fifth District Branch will hold its fifteenth annual meeting in Brooklyn on Tuesday, May 23d, under the presidency of Dr. J. D. Bryant.

Changes of Address.—Dr. R. N. Hawley, to No. 84 West One Hundred and Fiftieth Street; Dr. James P. Warshaw, to No. 68 Greene Avenue, Brooklyn; Dr. J. V. D. Young, to No. 60 West Seventy-sixth Street.

Marine-Hospital Service.—*On the Establishment of Stations and Public Health Service on the Atlantic Coast, with a Commission to the United States Marine-Hospital Service for the Purpose of Investigating the Diseases of the Coast.* By BENJAMIN C. F. SHAW. To be published by the Government Printing Office, Washington, D. C., in 1899.

BRUNNER, W. F., Surgeon, U. S. Marine-Hospital Service, at Manila, P. I., has been ordered to inspect the city of Manila, P. I., from Jan. 27, 1899.

COBB, J. O., Passed Assistant Surgeon. To report at bureau for special temporary duty. February 2, 1899.

COMFORT, N. C., Junior Hospital Steward. To report to acting assistant surgeon in temporary charge, Cincinnati, Ohio, for duty and assignment to quarters. February 8, 1899.

CUMMING, H. S., Assistant Surgeon. To proceed to Alexandria, Va., for special temporary duty. January 27, 1899.

DAVIS, HENRY E., Junior Hospital Steward. To report to medical officer in command, Boston, Massachusetts, for duty and assignment to quarters. February 8, 1899.

EAGER, J. M., Passed Assistant Surgeon. To proceed to Alexandria, Va., for special temporary duty. January 28, 1899.

GAHN, HENRY, Steward and Chemist. To proceed to New York, N. Y., for special temporary duty. February 1, 1899.

GLENNAN, A. H., Surgeon. Detailed by the secretary as quarantine officer, port of San Juan, Porto Rico, in accordance with executive order dated January 20, 1899. February 1, 1899.

GOODMAN, F. S., Senior Hospital Steward. To proceed to Havana, Cuba, for duty. February 1, 1899.

GREENE, JOSEPH B., Assistant Surgeon. To proceed to San Francisco, Cal., and report to the medical officer in command for duty. January 27, 1899.

GUTIÉRAS, G. M., Passed Assistant Surgeon. Granted leave of absence for ten days. February 3, 1899.

LAVINDER, C. H., Assistant Surgeon. To proceed to San Juan, Porto Rico, and report to Surgeon Glennan for assignment to duty at Ponce, Porto Rico. January 31, 1899. Detailed by the secretary as quarantine officer, port of Ponce, Porto Rico, in accordance with executive order, dated January 20, 1899. February 1, 1899.

PETTUS, W. J., Passed Assistant Surgeon. To proceed to Norfolk and Portsmouth, Va., for special temporary duty. January 28, 1899.

PURVANCE, GEORGE, Surgeon. Granted leave of absence for ten days. February 7, 1899.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to Alexandria, Va., for special temporary duty. January 27, 1899. To proceed to Santiago, Cuba, as inspector. January 31, 1899. Detailed by the secretary to organize quarantine service at port of Santiago, Cuba, in accordance with executive order dated January 20, 1899. February 1, 1899.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to New York city for special temporary duty. February 2, 1899.

WERTENBAKER, C. P., Passed Assistant Surgeon. To report to Governor Chandler at Atlanta, Ga., for special temporary duty. January 27, 1899.

WHITE, M. J., Assistant Surgeon. To proceed to Philadelphia, Pa., for duty. January 31, 1899.

WHITE, J. H., Surgeon. To represent service at a conference of health officers to be held at New Orleans, La., February 3, 1899. February 9, 1899.

WILLIAMS, L. L., Passed Assistant Surgeon. To proceed to Alexandria, Va., for special temporary duty. January 31, 1899.

Appointments.

COMFORT, NEWTON C., of Pennsylvania, and DAVIS, HENRY E., of Massachusetts, to be junior hospital steward. February 1, 1899.

MCGINNIS, R. H., of Florida, to be acting assistant surgeon for duty at the port of Jacksonville, Florida. January 28, 1899.

Promotions.

CARRINGTON, P. M., Passed Assistant Surgeon. Commissioned as surgeon. January 24, 1899.

HERTY, F. J., Junior Hospital Steward. To be senior hospital steward. January 26, 1899.

SCOTT, E. B., Junior Hospital Steward. To be senior hospital steward. February 1, 1899.

Society Meetings for the Coming Week:

MONDAY, February 20th: New York Academy of Medicine (Section in Ophthalmology and Otolaryngology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, February 21st: New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Chemung (quarterly), Kings, and Livingston (quarterly), N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, February 22d: New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, February 23d: New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, February 24th: New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, February 25th: New York Medical and Surgical Society (private).

Births, Marriages, and Deaths.

Born.

GARCIN.—In Richmond, Virginia, on Wednesday, February 8th, to Dr. and Mrs. Ramon D. Garcin, a son.

Married.

BARTHOLOMEW—GROSCH.—In New York, on Monday, January 30th, Dr. H. S. Bartholomew and Miss Marie Grosch.

FLINT—SLOCOM.—In New York, on Tuesday, February 11th, Mr. Sherman Flint, son of Dr. Austin Flint, and Miss Margaret Olivia Slocom.

LEROSEN—HOPKINS.—In Lafayette, Louisiana, on Thursday, February 9th, Professor Wesley A. Lerosen and Miss Susie Hopkins, daughter of Dr. Thomas B. Hopkins.

McDONALD—BIRWELL.—In Ebenezer, Mississippi, on Wednesday, February 8th, Dr. John A. McDonald, of Durant, Mississippi, and Miss Pattie Birwell, daughter of Dr. William B. Birwell.

MOFFETT—LUSK.—In New York, on Saturday, February 11th, Mr. Cleveland Moffett and Miss Mary Lusk, daughter of the late Dr. William K. Lusk.

MCKEN—WILCKENS.—In Brooklyn, on Tuesday, February 14th, Dr. George Morgan Mcken and Miss Elizabeth Wilkens.

THOMAS—FOSTER.—In New Haven, on Wednesday, February 8th, the Rev. George Herbert Thomas and Miss Margaret Codrington Foster, daughter of Dr. John P. Foster.

Died.

BIGELOW.—In Amherst, Massachusetts, on Thursday, February 9th, Dr. Orvis F. Bigelow, in the sixty-fifth year of his age.

BISSELL.—In Buffalo, on Monday, February 6th, Lora Hudson Bissell, wife of Dr. E. L. Bissell.

BRANDT.—In Ontario Centre, N. Y., on Saturday, February 4th, Dr. John W. Brandt, aged seventy-five years.

CLARK.—In Kosciusko, Mississippi, on Tuesday, February 7th, Dr. Charles B. Clark.

ETHERIDGE.—In Chicago, on Friday, February 10th, Dr. James H. Etheridge, in the fifty-fifth year of his age.

HITCHCOCK.—In Hyde Park, Massachusetts, on Monday, February 6th, Katherine, infant daughter of Dr. Henry R. Hitchcock.

KEEGAN.—In Jersey City, on Friday, February 10th, Dr. J. Edward Keegan.

RUSSELL.—In Spartanburg, South Carolina, on Monday, February 6th, Dr. William T. Russell, in the seventy-second year of his age.

SLICER.—In St. Joseph, Louisiana, on Wednesday, February 8th, Dr. John Edwin Slicer, in the sixty-ninth year of his age.

Obituaries.

JAMES HENRY ETHERIDGE, M.D., OF CHICAGO.

THE death of Professor Etheridge, of the Rush Medical College, a distinguished gynecologist, inflicts serious loss upon the medical profession, not only of Chicago, but of the whole country. He was a native of the State of New York, but obtained his medical education in Chicago, where he practised from 1869 up to the time of his death. He was a frequent contributor to medical journals, and he was active in society work.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

(Continued from page 207.)

VI.

CONTRACT OF PHYSICIAN WITH PATIENT.

Contract Defined and Classified.—A contract has been defined by an eminent law writer of the early twentieth century as "an agreement upon sufficient consideration

to do or not to do a particular thing."^{*} This agreement may be express or implied. Where the particulars of the agreement are averred and mutually agreed upon, the contract is said to be an express contract; but where no particular terms are set forth, the law will take into consideration the relations of the parties, and will, by implication, create for them such an agreement as reason and justice would dictate. The contract is then said to be an implied contract. Such contracts may exist without our knowledge or volition, and, as a matter of fact, do arise from nearly every transaction into which we enter, thus constituting much the greater number of contracts by which we are bound.

Express contracts are either written or verbal. Written contracts are, as the name implies, reduced to writing and signed by the parties to be bound; while oral contracts are formulated only by word of mouth, and may be made either in the presence of witnesses or when the contracting parties only are present. In the absence of statutes which provide that certain contracts must be in writing, an oral contract is in all respects as binding as a written contract, the only advantage of the latter being the much greater ease and certainty with which the exact agreement is proved.

It will be readily understood from the preceding that whenever a physician or surgeon undertakes the treatment of a patient certain contracts are created by the law founded upon the relation of the parties. These contracts will be taken up and considered in the order in which they naturally follow.

Contract implied from Exercise of Professional Duties.—By merely undertaking the treatment of a patient the physician impliedly contracts with that patient that he has such skill, science, and information as will enable him properly and judiciously to perform the duties of his profession.[†] This is a contract which the law creates irrespective of any statutes prescribing qualifications for the practice of medicine, and one which was implied at common law before statutes existed upon the subject. The exact degree of this skill and knowledge which the physician is required to possess has many times been the subject of judicial consideration. It would be manifestly unjust to the physician or surgeon to require him to possess the highest degree of knowledge or skill, while, on the other hand, the public welfare requires that the standard be kept well above that of the tyro or quack. The courts have accordingly held in all cases submitted to them that he is by this implied contract required to be possessed of "proper," "reasonable," "ordinary" knowledge and skill.[‡] But whether or not the proper degree of knowledge and skill is brought to the particular case must be determined from the circumstances.

Advanced State of Medical Science to be considered.

It is a well-settled proposition of law that in fixing of the degree of knowledge and skill in any given case due regard must be had to the advanced state of the profession at the time.[§] If, for instance, an operation were to be performed upon the eye of a person whose physical condition was such as to render it unsafe to

^{*} Blackstone.

[†] Woodcock Clapp, 1 Speed, 140 (N.Y.).

[‡] Reber v. Hering, 115 Pa. 81, 200; Bagnall v. Manly, 82 Ill. 379; Gramann v. Boettner, 56 Ind. 194; O'Hara v. Wells, 14 N.Y. 469; Vandover v. Bergholt, 8 West. 267; McQuinn v. Denovan, 85 Ill. 140; Peck v. Martin, 15 Ind. 117.

[§] McCallister v. McWhorter, 13 Pa. 80, 107.

put him under the influence of general anesthetics, it would be evidence of culpable ignorance and lack of skill for the operator to proceed by using other than local anesthetics; whereas about nineteen years ago recognized authorities on the subject laid down the rule that chloroform should always be administered.*

Opportunities of Location to be considered.—It will also be manifest that the opportunities and location of the physician, and more particularly the surgeon, are a very important factor in determining the degree of skill and proficiency which he should be reasonably expected to attain. In the larger cities the physician and surgeon has the opportunity of attending the hospitals and clinics, of witnessing and taking part in the most difficult and complicated operations, and of attending lectures and consultations whereby he is kept in constant touch with the ablest and most advanced of his profession; whereas in the small towns and country districts the physician and surgeon has fewer opportunities of observation and practice, especially in the line of surgical work, and can not reasonably be held to possess so high qualifications as his more favored professional brother.

The law takes this condition into consideration in determining the degree of skill and knowledge which a physician impliedly contracts to possess, and accordingly requires that he have the average skill and ability ordinarily possessed by men of his profession in *similar localities*.†

Test applied to all acting as Physicians.—This test of professional knowledge and skill is not applied to the regular qualified practitioner alone, but to any person who holds himself out as a healer of diseases, and who accepts employment as such.‡ Should, for example, one represent himself as qualified to treat and operate upon patients, who was ignorant of the most rudimentary principles of medicine and surgery, the law would extend to him no indulgence because of his unfortunate lack of scientific training, but in case deleterious results attended his treatment the same test would be applied in his case as in the case of the regularly qualified physician and surgeon practising in the same locality and at the same time—that is, he would be required to exercise at least the ordinary skill and ability possessed by physicians and surgeons in similar localities. Failing in this, he would be held to respond in damages to the extent of the injury suffered by reason of his incompetency.

Contracts to Use Care and Diligence.—The physician and surgeon also impliedly contracts that he will use reasonable and ordinary care and diligence in the exercise of his skill and the application of his knowledge to accomplish the purpose for which he is employed.¶ It is patent that a physician and surgeon may be possessed of a very superior degree of knowledge and skill and yet fail in the successful treatment of a case by not using the proper care in applying his knowledge or exercising his skill. For example, a physician of superior learning and skill might in the hasty or indifferent examination of a patient fail to observe symptoms characteristic of the disease from which the patient is suffering, and treat him for a different ailment with

disastrous results, while a physician with less skill and learning could by a more careful examination of the patient detect the true condition, and by applying the generally recognized remedies effect a cure.

To determine what is ordinary care and diligence no absolute rule can be prescribed. Justice Story, in referring to the impossibility of a fixed standard or test, said: "Different things may require very different care. The care required to build a common doorway is quite different from that required to raise a marble pillar, but both come under the description, ordinary care."* And so in the treatment of patients, that which in one case might be ordinary care would perhaps in another be gross negligence. The question is peculiarly one of fact, and can only be determined by taking into consideration the condition of the patient in the particular case, together with all of the attendant circumstances. If, after such an examination, it is found that the care and diligence exercised are those which an ordinarily careful physician, practising in a similar locality, would have exercised in a like case, then it is fair to conclude that the legal requirement of ordinary care and diligence has been fulfilled.

Degree of Care not Necessarily Proportionate to Character of Injury treated.—It must not be inferred from the foregoing description of ordinary care and diligence that the degree of care and diligence or care and skill necessary to be exercised in a particular case must be proportionate to the severity of that case. Such a doctrine has been urged but has been very wisely rejected by the courts.† If such a rule were adopted the conclusion would naturally and logically follow that a physician and surgeon is legally required to exercise care and skill adequate to the severity of all cases which he undertakes. Such a test is manifestly absurd and beyond the possibility of human requirements.

Refusal of Proffered Assistance does not Alter implied Contract.—The fact that a physician or surgeon refuses to accept the proffered assistance of other medical men does not increase his liability or responsibility, but simply amounts to an implied declaration that he possesses the ability which the law requires of him.‡

Physician's Contract unaltered where Services are Gratuitous.—Nor does the fact that a physician makes no charge and receives no compensation for treating a particular case alter in any degree the amount of knowledge, care, and skill which it is incumbent upon him to have and exercise.¶ In instructing a jury upon this question, Justice Pryor stated the law, together with the reason upon which it is based, so fully and clearly that we can do no better than to use his words: "It appears that the plaintiff was a charity patient; that the defendant was treating her gratuitously. But I charge you that this fact in no way qualifies the liability of the defendant. Whether the patient be a pauper or a millionaire, whether he be treated gratuitously or for reward, the physician owes him precisely the same measure of duty and the same degree of skill and care. He may decline to respond to the call of a patient unable to compensate him; but if he undertake the treatment of such a patient he can not defeat a suit for malpractice nor mitigate a recovery against him upon the principle that the skill and care required of a physician are

* W. Hall, *Treatise on the Eye*, ed. of 1880.

† *White v. Hill*, 101 U. S. 629; 70 N. W. Rep. 759; 37 L. R. A. 800 (4). *Palky v. Palmer* (Mich.), 5 Det. L. N., 198. *Small v. How*, and 128 Mo., 131.

‡ *Nelson v. Harrington*, 72 W. 501.

¶ *Carpenter v. Blais*, 50 N. W. 696.

* Story on Railments, § 129.

† *Udby v. Barnes*, 70 Ill., 162.

‡ *Potter v. Warner*, 91 Pa. St., 362.

¶ *Du Bois v. Decker*, 130 N. Y., 325.

proportioned to his expectation of pecuniary recompense. Such a rule would be of the most mischievous consequence, would make the health and life of the indigent the sport of reckless experiment and cruel indifference." *

This rule must, however, be understood with the qualification that a party who undertakes the gratuitous treatment of another incurs no liability unless he professes to be a physician and undertakes the treatment as such. For if he merely gives his advice or assistance as a friend or neighbor he incurs no professional responsibility.† Where, for example, one not a physician, employed in the capacity of a midwife, attempted to treat the infant's eyes, and by reason of the inefficient remedies used the child became blind, the law would not hold the midwife as contracting to possess the same skill and learning as it would a regular physician who had gratuitously undertaken the same case.

Dentist's Contract implies Knowledge, Skill, and Care.—It may be observed in passing that a dentist implies by the exercise of the duties of his profession that he is possessed of the same amount of knowledge and skill in his profession, and will exercise the same degree of care and diligence in their application, as that impliedly contracted for by the physician in the medical profession.‡

Contracts to Use Best Judgment.—In addition to the contract of the physician implying that he is possessed of learning and skill and will exercise reasonable care and diligence in the treatment of his patients, it also implies that in all cases of doubt he will use his best judgment. The contract is not that his judgment will be infallible, but simply that it shall be a reasonably good judgment, and that in all cases of doubt he will fully exercise it.

In the abstract this rule appears to mean very little, but when it comes to the particular case: when the physician finds his patient suffering, perhaps, with conditions symptomatic of several diseases; when by the exercise of his best knowledge and skill, or, for that matter, the best knowledge and skill of the most enlightened of his profession, he can not determine the patient's exact condition; then the rule has a real meaning to him. In such an emergency it can not fail to be a great comfort and relief to know that an intelligent and careful exercise of his best judgment is all that is required.

If, by way of showing a further application of the rule, a surgeon is requested by a patient to perform a certain operation which, in the opinion of the surgeon, is unwise, unnecessary, or will result injuriously to the patient, it becomes his duty to give the patient the benefit of his judgment, whether it is asked for or not, and if the surgeon fails to advise against such operation, but acts as requested, he becomes liable to the patient in damages for whatever injuries result to him by reason of such unnecessary or unwise operation. But, if the patient is of mature years and of sound mind, and upon being advised of the impropriety of such operation still insists upon its performance, the surgeon may accept the judgment of the patient, and, if the operation is skillfully and properly performed, he can not be held responsible to the patient because its result is injurious.

(To be continued.)

* Becker vs. Jankowski, 27 Ark. X. C. 45.

† McSwain vs. Lowe, 40 Ill., 269.

‡ Smith vs. Henry, 19 Mo., 155.

Letters to the Editor.

THE LICENSE TO PRACTISE IN INDIANA.

COLUMBUS, OHIO, February 7, 1899.

To the Editor of the New York Medical Journal:

SIR: Will you allow a suggestion or probably better a correction?

On page 169 (Mr. Arthur N. Taylor's article) he says: "In Indiana the license to practise is not granted by a State board and recorded in the particular county in which the physician intends to practise," etc. The fact is that that is just what is and must be done to-day. Mr. Taylor is two years behind in the law regulating the practice of medicine in the State of Indiana. And previous to the passage of the bill creating a State board it was necessary to be registered by a county clerk, and that registration entitled the holder to practise not only in that county but anywhere in the State. I would advise Mr. Taylor to write to the secretary of the State board of medical examination and registration of Indiana for a copy of the law. A. J. MILLER, M. D.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of November 2, 1898.

The President, Dr. S. ALEXANDER, in the Chair.

(Continued from page 158.)

Electro-hæmostasis in Surgery.—Dr. A. J. SKENE read a paper with this title. (See page 223.)

Dr. W. M. POLK asked Dr. Skene how far the heat extended beyond the electrode, because he was interested in the possible consequences in an operation such as vaginal hysterectomy.

Dr. SKENE replied that the shield forceps, applied in front and behind the compression forceps, protected the ureter in front and the rectum behind, and the heat did not extend into the broad ligament more than from a line to an eighth of an inch.

Dr. POLK said that this answer showed that, from this standpoint, the method was free from criticism. Unfortunately, all that he knew about the subject was from Dr. Skene's paper, but this, in itself, was enough to make him endorse the treatment. The large number of cases in which the method had been employed without secondary hemorrhage would seem to place it on the basis which would lead to its adoption by every operator. But, notwithstanding his confidence in Dr. Skene's carefulness and work, he personally confessed a good deal of timidity in taking up this work. This was, of course, no valid excuse, because it could apply to every new method that had been brought forward. If one were once fully equipped with the necessary electrical apparatus, there should be no reason why any other surgeon should not be able to do it successfully and results.

Regarding the use of heat in the treatment of cancer, in the paper, he was inclined to agree with Dr. Skene's admirable advice that he would not recommend it. There is no present and no future in the use of heat in the treatment of cancer, and the only way in which it can be used is in the treatment of the cancer of the breast.

known that the ligature *en masse* was a defective method, and was, therefore, avoided whenever possible by good operators. If the blood-vessels could be isolated and individually ligated, he believed there was no ground for the criticism made in the paper concerning the subsequent shrinkage of the stump and the consequent danger of secondary hæmorrhage. The danger of contamination of a ligature when applied to a suppurating surface was, of course, a real one, but the number of cases coming into the hands of any single individual was comparatively small. He believed that even in these cases the ligature could be applied in a space that could be made so aseptic as to annul that criticism. Again, the reader of the paper had said that these ligatures frequently cut through the tube and became infected in this way, although originally perfectly aseptic, and that this contamination prevented the absorption of the ligature. This danger had been so thoroughly recognized that many operators made it a rule never to ligate a tube, but to dissect it out as far as the cornu of the uterus, and then close the opening by the application of several fine silk sutures, such as were used in ordinary intestinal operations. The application of the ligature almost exactly as Ambroise Paré in 1560 suggested and urged would relieve it from very many of the criticisms suggested. The speaker said that he could not add one word regarding the use of electro-hæmostasis, but he intended to follow Dr. Skene's suggestions as soon as opportunity offered.

Dr. CLEMENT CLEVELAND said he regretted exceedingly that he did not possess the powers of speech of the gentleman who had just spoken, for he had had experience with the method. When he had first learned of the method, a year and a half ago, he had begun its use and had employed the instruments almost constantly since then. His experience with it led him to agree most thoroughly to all the points made in the paper. He had not been able to secure all of the instruments and had therefore used the larger clamps in the hysterectomies and the removal of the larger ovarian tumors. He found that the statement made regarding the aseptic condition of the tissues and the devitalization of the nerves had been confirmed in his own experience, because these patients had suffered much less pain than those operated upon in the usual manner. He had not found it necessary to employ the instrument specially devised for use on the pedicles of ovarian tumors, for the reason that it was his practice to twist the pedicle into a cord so as to prevent it from spreading. Very rarely had he found it necessary to reapply the forceps. He had been in the habit of placing gauze or sponges around the forceps to prevent the burning of the adjacent tissues, but would hereafter use the special shields. He had never injured the ureters in any operation in which this forceps had been used. He employed the street current, modified by a transformer, and ordinarily left the forceps on for three minutes, fearing to remove them more quickly. The current strength had usually been six amperes. He had nothing but words of commendation for the method, and would be very sorry now to be deprived of these instruments.

Dr. W. R. PRYOR said that, accepting all that had been written by Dr. Skene regarding hæmostasis *en masse*, he had instituted a series of experiments regarding the effect of the method when blood-vessels were treated in continuity. The blood vessel selected was the third in size in the human body—the external or internal iliac or the femoral. The forceps had been applied, and

then the blood-vessel had been tested to see what pressure was required to blow out the inspissated end. He had found that a ligature force of three pounds would always bring about complete coaptation, and that a force of thirteen pounds within the blood-vessel was required to overcome the agglutination brought about by the electricity. This was only true when the clamp was applied at a right angle to the blood-vessel, and that when the blood-vessel was seized, as it usually was, by the end of the clamp, much less pressure would blow out the end. The surgeons of the present day were in the habit of ligating in continuity. It was interesting to note that, without charring the tissues at all, an occlusion could be obtained which was four times stronger than the force exerted by the heart.

Dr. FREDERICK HOLME WIGGIN said that he had not had any personal experience with electro-hæmostasis. He thought, with Dr. Polk and Dr. Pryor, that it was entirely feasible to employ ligatures which were perfectly satisfactory, such, for example, as catgut treated by the formalin method and boiled before using. The trouble experienced in the past from the use of the cautery for the control of hæmorrhage had been that the heat had been too high. This had apparently been obviated by Dr. Skene, and hence the method should prove very useful, especially in pelvic work.

Dr. C. C. BARNOWS said that he would give the method a trial as soon as an opportunity was afforded. The only theoretical objection in his mind had been the question as to its safety, but this seemed to have been pretty definitely settled.

Dr. A. B. JOHNSON asked Dr. Skene whether he had employed this method in operations in which a very large number of small blood-vessels had had to be controlled—as, for instance, in operations for the removal of the breast, or for extirpation of a tumor of the neck—and, if so, as to whether time was lost or gained. He would also like to know whether in the treatment of hæmorrhoids the period of convalescence was shortened or rendered more protracted by the electric method. The method seemed to him extraordinarily attractive, and he was anxious to try it.

Dr. R. A. MURRAY said that he noticed all of the instruments exhibited looked extremely well, and consequently he would like to know how much of the control of hæmorrhage was due to the perfect instruments and how much to the electricity. The comparatively slight heat certainly could not accomplish what Keith used to with the cautery iron and clamp. In his opinion, if the instruments were clamped and left on for three minutes without any electric current there should be hæmostasis. In making an abdominal incision where there was a good deal of hæmorrhage, he would like to know whether Dr. Skene would apply the small forceps and obliterate the blood-vessel by the electric current before opening the abdominal cavity. If this was his practice, did not the blood-vessels so treated interfere with the healing of the abdominal wound? Another interesting point in this connection was as to whether the method was applicable in controlling numerous bleeding points deep in the pelvis, and at the same time keep the tissues aseptic. It seemed to him from theoretical considerations that the parts that had been grasped by the forceps would be likely to become septic.

Dr. A. BROTHMAN asked if the method did not unduly prolong the operation, and if the apparatus was not too cumbersome for use in private, and particularly in cases seen out of town.

Dr. R. T. MORRIS said that on general principles it was well to do away with the ligature, provided a method could be substituted which was equally good. He would like to know whether it was Dr. Skene's intention to have surgeons employ this method to the exclusion of others. For instance, he frequently enucleated suppurating tubes or adherent masses in the pelvis, and afterward closed large bleeding veins by a number of very fine catgut sutures. He could insert eight or ten such sutures quite rapidly and control venous hemorrhage which could not be checked by the application of antipyrine.

Dr. R. H. WYLIE asked if any difficulty had been experienced in applying the method where there was bleeding deep in the pelvis, and a good deal of fluid surrounded the forceps, as in cases of ascites. He would like to know whether there was any appearance of the tissues which could be used by the surgeon as an indication of the completion of the hemostasis before taking off the forceps. If we depended upon the ampèremeter, it must be unreliable, because the amount of electricity would vary with the amount of tissue included in the grasp of the forceps and with the presence or absence of fluids about it.

Dr. SKENE closed the discussion. He said that electro-hemostasis was more certain than the application of the ligature, and, moreover, it was impossible with the ligature to leave the stump of a pedicle or artery in septic tissue as clean and as free from sepsis, and as sure to make rapid repair, as where the method advocated in the paper was used. But the great point of superiority of the method of electro-hemostasis over the ligature was not in ligation of arteries alone, but in the closing of canals lined with mucous membrane. There never lived a surgeon who could be sure when he had tied a canal lined with mucous membrane that it would remain closed; it was well known that a great many of them would reopen. The later writings of Professor Rice, of Chicago, showed that in many cases the Fallopian tube opened and septic material escaped into the peritoneal cavity, resulting again and again in inflammations there. Dr. Polk had referred to this difficulty indirectly when he had stated that this could be obviated by resection of the tube at its insertion in the uterus. This practice, however, was very recent, and had not been tried by many surgeons, and, therefore, remained doubtful, to say the least. With a septic uterus and septic tubes one could not close the opening with any kind of suture and absolutely prevent secondary infection. He could state this positively, because he had tried it. The same remark applied to the closure of the vermiform appendix. Even Dr. Morris, he thought, would acknowledge that he had seen faecal fistula from reopening of the appendix because of the adoption of faulty methods. If it were closed in the way he described, it would be found that it would not reopen. More than this, he could close up the appendix close to the intestine without the heat injuring the bowel. He maintained that by his method the process of repair was shorter, and the subsequent results very much more satisfactory. There were more permanent cures after salpingectomy when this method was used than with any other. Being familiar with the work of Dr. Cleveland, he felt that the approbation of such a surgeon was all that the most ambitious could desire. Regarding the pressure experiments made by Dr. Price, he could say that he had made the same experiments with the same results. He was of the opinion that if properly treated the arteries could not be opened by any means—even by dissection. With reference to Dr.

Johnson's questions, he would say that he had extirpated the mammary gland and had been able to control the blood-vessels as rapidly as he had ever been able to do it with the use of ligatures, but he had done it by keeping several arteries under the electrical treatment at a time, which could be done with the help of skilled assistants. There was no more vascular condition than in omental adhesions in certain large ovarian and fibroid tumors, yet he could close those blood-vessels by the clamp more quickly than by the use of the ligature, and avoid entirely ripping up of the omentum, which caused bleeding that was difficult to control. He used to dread treating varicose veins of the labia, but now he simply incised the skin, picked up the blood-vessels with the clamp, and, in one or two minutes, he reduced the mass of blood-vessels to a fine ribbon of tissue, which could be left in the wound without fear of subsequent trouble. Convalescence after the application of electro-hemostasis to hemorrhoids was as quick as by any other method, and was much less painful than when the old cautery method or ligature was used. In the removal of papillomatous growths from the bladder after suprapubic cystotomy, he found it was only necessary to expose them, desiccate them, and clip them off, leaving only small stumps. The same practice could be followed with satisfaction in the treatment of bleeding vessels deep down in the pelvis. It would be impossible to treat bleeding vessels in Douglas's cul-de-sac if the cavity was filled with blood, but he never experienced any difficulty from this source, because in his abdominal work he always kept beside him an immense aspirator, with which he could quickly remove the fluid. With this instrument he could draw off two gallons of fluid from the abdominal cavity in from a minute to a minute and a half. After the fluid had been removed in this way, the electro-hemostasis could be successfully employed. It was impossible to tell whether the desiccation had been completed before the removal of the forceps, just as it was in the application of the ligature to a blood-vessel. The experienced surgeon knew pretty well by touching the forceps with the finger whether or not the heat was sufficient, and whether the process had probably been completed. When he opened the abdominal cavity it was his practice to seize the blood-vessels with small forceps for not longer than half a minute. There was no interruption to immediate union when the hemorrhage was controlled in this manner.

Book Notices.

On the Origin and Progress of Renal Surgery. With Special Reference to Stone in the Kidney and Ureter, and to the Surgical Treatment of Calculus of the Ureter. Being the Hunterian Lectures for 1898. By other with a Critical Examination of Subsequent Lectures of the Ureter. By HENRY MORRIS, M.A., M.B. Lond., F.R.C.S., Hunterian Professor of Surgery and Pathology, Royal College of Surgeons of England, etc. Philadelphia: P. B. Blakely, Son & Co., 1898. Pp. viii+288. 11s. 6d. 8s. 6d.

This work will be of great value to the student of surgery, so closely does it touch upon the subject of which it treats. The treatment of the ureter is a part both historical and practical, and the author has done his

press one with the remarkable progress that has been made in the surgical treatment of diseases of the kidney and ureter during the past few years and the not less remarkable advance in conservative methods of procedure. Nephrectomy has become less and less the operation of choice, owing to the greatly diminished percentage of mortality that has been shown to follow nephrotomy and nephrolithotomy, and to the fact that the affected kidney retains its functional activity to a greater or lesser degree after either of the latter operations.

In the second lecture the many difficulties in the diagnosis of renal calculus are discussed at length, together with the dangers of quiescent and unsuspected calculi. This lecture is rather of the nature of a plea for better diagnosis and earlier operation, a plea that we think is distinctly justified by the results of late operation and, unfortunately only too often, by post-mortem findings.

The third lecture treats of calculous anuria in detail, the pathology, symptoms, and diagnosis, and of the technics of the exploration of the kidney and ureter for calculus. The necessity of thoroughness is insisted on, and all such methods as needling and external palpation are discountenanced as insufficient to determine the presence of small stones. The extraperitoneal method of exposing the kidney through a lumbar incision is the only one described, for by it not only the kidney but the ureter as far as the pelvic brim can be explored and, if need be, operated upon. If it becomes necessary to open the pelvis of the kidney directly, Morris recommends that the wound be closed by suture in most cases.

This ends the Hunterian Lectures, but a chapter is added upon injuries of the ureter, and a large number of tabulated cases forms by no means the least valuable part of this excellent little book.

Atlas of Methods of Clinical Investigation, with an Epitome of Clinical Diagnosis and of Special Pathology and Treatment of Internal Diseases. By Dr. CHRISTERED JAKOB, formerly First Assistant in the Medical Clinic at Erlangen. Authorized Translation from the German. Edited by AUGUSTUS A. ESNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic, etc. With One Hundred and Eighty-two Colored Illustrations upon Sixty-eight Plates, and Sixty-four Illustrations in the Text. Philadelphia: W. B. Saunders, 1898. Pp. 259. [Price, \$3.]

It is probable that by acquaintance with other volumes of this series of atlases our readers are familiar with the character of the works and the object with which they have been produced. It is indisputable, as the Note to the Editor says, that "a good illustration will often convey more and leave a deeper impression than the most elaborate description." For this reason there have been grouped in this volume a most excellent collection of colored plates illustrative of the methods of clinical investigation, microscopical and chemical, to which is added a descriptive text. This text is good, does not differ materially from that found in the smaller works upon clinical diagnosis, and is subordinate to the pictorial representations. Of these pictures—the major element of the book—admiration and approval may be expressed. The plates portraying microscopical appearances are almost uniformly good, those of chemical appearances are good for the greater part, though occasionally of undue splendor of color, and those which are

diagrammatic representations of thoracic and of abdominal diseases are the best of all. The use of colors in these diagrams and the ingenuity of the diagrams themselves can not fail to assist the student in his pursuit of the mysteries of physical diagnosis.

Lectures on the Theory and Practice of Vaccination.

By ROBERT CORY, M. A., M. D. Cantab., F. R. C. P. Lond., Physician in Charge of the Vaccination Department of St. Thomas's Hospital, etc. New York: William Wood and Company, 1898. Pp. 122.

THESE six lectures will afford the medical reader much satisfaction, for they ably cover a field in which we are all perforce interested, and they represent the views of one to whom long experience with vaccination and all that pertains to it has given clear title to be regarded as an authority.

The first lecture is devoted to the reasons for the vaccination laws which now are found so generally among civilized peoples. Naturally this chapter is both historical and statistical, and to all but the hopelessly bigoted must be most convincing. The second chapter concerns the histology of vaccine and of small-pox vesicles. The third chapter shows wherein a secondary vaccination differs from the primary. The fourth chapter is descriptive of eruptions that sometimes follow vaccination, but its value is considerably marred by some absurd plates which in this day of superior illustrations are inexcusable. The fifth chapter details the practice of vaccination, and the sixth discusses in a remarkably interesting manner the relations existing between small-pox on the one hand and cow-pox, horse-pox, and camel-pox on the other. The work is one of very great value.

Political Crime. By LOUIS PROAL. With an Introduction by Professor FRANKLIN H. GIDDINGS, of Columbia University. New York: D. Appleton and Company, 1898. Pp. xxii-355. [Price, \$1.50.]

THE treatise which Proal has written upon political crime—by which term is here intended the crime of which governments are not the victims but the authors—is masterly, as might have been expected. The subject is a vast one and one which, however morality may urge its study, sophistry and the plea of necessity have always been too apt to distort. It is pleasant, therefore, to become possessed of a work which adequately treats of the subject, and one whose author refuses to be guided in his judgments by aught save right, and who, moreover, has the ability to sustain his judgment by well-supported proof.

It may be said that political crime can be regarded as in no sense a medical topic, or one only by the greatest stretch of the imagination. In a measure this is true, for, though governments may or may not be individuals, classes and bodies and epochs are subject to epidemic influences of a psychological kind. Apart from this, however, the study of politics is one which concerns every man, be he or be he not a physician, and nobody who thinks can fail to derive pleasure and profit from the thoughtful perusal of this masterly work. Too often, we think, the physician is apt to hold himself, or to be held, apart from the community, and therefore not receptive of matters which are not technical. This is unfortunate and far from what should be, for by circumstances and ordinarily by education the physician is well equipped to be a leader in the com-

munity and an agent politically for the public good. "Politics" should not be a despicable thing to any man, and least of all to one who bears the responsibilities which education imposes. Be he physician or layman, then, his conception of political science can not but be broadened by a work like this.

The Medical News Pocket Formulary for 1899. By E. QUIN THORSTON, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. 272. [Price, \$1.50.]

Saunders's Pocket Medical Formulary. With an Appendix containing Posological Table; Formule and Doses for Hypodermic Medication; Poisons and their Antidotes; Diameters of the Female Pelvis and Foetal Head; Obstetrical Table; Diet List for Various Diseases; Materials and Drugs used in Antiseptic Surgery; Treatment of Asphyxia from Drowning; Surgical Remembrancer; Tables of Incompatibles; Eruptive Fevers; Weights and Measures, etc. By WILLIAM M. POWELL, M. D., Member of the Philadelphia Pathological Society, etc. Fifth Edition, thoroughly revised. Philadelphia: W. B. Saunders, 1899. Pp. 290. [Price, \$1.75.]

THESE booklets contain a large number of standard prescriptions in a form easily accessible for reference, and if used with discrimination will prove helpful in practice.

Suite de monographies cliniques sur les questions nouvelles en médecine, en chirurgie, en biologie. No. 11. Les paralysies générales progressives. Par le Dr. M. KLUPPEL, Médecin des hôpitaux de Paris. Pp. 25. No. 12. Le myxodème. Par le Dr. G. THIBERGIE, Médecin de l'hôpital de la Pitié. Pp. 32. Paris: Masson et Cie., 1898. [Chaque monographie séparément 1 fr. 25.]

THESE two brochures constitute the eleventh and twelfth clinical monographs in the *Œuvre médico-chirurgicale* published under the direction of M. Critzman. They are useful presentations of the subjects of which they treat.

BOOKS, ETC., RECEIVED.

A Practical Treatise on Fractures and Dislocations. By Lewis A. Stimson, B. A., M. D., Professor of Surgery in Cornell University Medical College, etc. With Three Hundred and Twenty-six Illustrations and Twenty Plates in Monotype. New York and Philadelphia: Lea Brothers & Co., 1899. Pp. xiv 49 to 818. [Price, \$5.]

The American Yearbook of Medicine and Surgery. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Collected and arranged with Critical Editorial Comments by Samuel W. Abbott, M. D., John J. Abel, M. D., J. M. Balby, M. D., Charles H. Burnett, M. D., J. Chalmers Da Costa, M. D., W. A. Newman Dorland, M. D., Louis A. Duhring, M. D., D. L. Edsall, M. D., Virgil P. Gilney, M. D., Henry A. Griffin, M. D., John Guerrier, M. D., C. A. Hamann, M. D., Alfred Hand, Jr., M. D., Howard F. Hansell, M. D., Milton B. Hartzell, M. D., Barton Cooke Hirst, M. D., E. Fletcher Ingals, M. D., Wyatt Johnston, M. D., W. W. Ken,

M. D., Henry G. Olds, M. D., Wendell Robert, M. D., David Riesman, M. D., Louis Starr, M. D., Alfred Stengel, M. D., G. N. Stewart, M. D., J. R. Tillinghast, Jr., M. D., and J. Hilton Waterman, M. D., under the General Editorial Charge of George M. Gould, M. D. Illustrated. Philadelphia: W. B. Saunders, 1899. Pp. 4 to 1102. [Price, \$6.50.]

Diet in Illness and Convalescence. By Alice Worthington Winthrop. Profusely Illustrated. New York and London: Harper & Brothers, 1899. Pp. vii-3 to 287.

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Golden Rules of Gynecology. By S. Jervois Aarons, M. D., Registrar to the Hospital for Women, etc. Golden Rules Series. No. 2. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1899. Pp. 11 to 63. [Price, 1s.]

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Archives of the Röntgen Ray (formerly Archives of Skiagraphy). Edited by Thomas Moore, F. R. C. S., Surgeon to the Miller Hospital, and Ernest Payne, M. A. (Cantab.), etc. London: The Rebus Publishing Company, 1898. Pp. 45 to 63.

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Thirty Poisonous Plants of the United States. By V. K. Chesnut, Assistant Botanist, United States Department of Agriculture. Farmers' Bulletin No. 86.

Combined Typhoid and Malarial Infection. Report of a Case and Review of the Literature, with Special Reference to the So-called Typhoid and Malarial Fever. By Irving Phillips Lyon, M. D., of R. I. (Reprinted from the *American Journal of Medical Sciences*.)

A Case of Concentric Displacement of the Heart to the Right, presenting Some Unusual Features. By Charles Lyman Greene, M. D., of St. Paul, and J. L. Rothrock, M. D., of St. Paul. (Reprinted from the *Philadelphia Medical Journal*.)

Miscellany.

Sudden Death during the Puerperium.—M. Porak and M. Durante (*Gazette hebdomadaire de médecine et de chirurgie*, December 22, 1898) communicated recently to the Obstetrical and Gynecological Society several cases of sudden death during the puerperium. In one case the patient was the subject of old-standing cardiopathy. In another, the woman was rendered very anemic by severe hemorrhage, rendering necessary transfusion of blood. In a third, sudden death was occasioned by a gaseous embolus consequent upon an intra-uterine injection.

In a recent case, a woman who had been lately confined at the Maternity, the confinement being normal save for a slight hemorrhage, had a rise of temperature on the fifth day to 100.4° F. without any corresponding symptoms as regarded her general condition. Subsequently her temperature fell to normal and nothing gave reason to fear any complications. On the ninth day, during her breakfast, she fell abruptly from her bed, and was found to be dead. At the autopsy a double uterus was found, as had been known to be the case during life. There was only one kidney. In seeking for the cause of death it was found in embolism of the large branches of the pulmonary artery. The clots found in these vessels were non-adherent. The point of origin of the embolus was discovered at the extremity of the right hypogastric vein, which was affected with endophlebitis with a small adherent clot. The histological examination showed infectious endophlebitis, probably due to *Bacillus coli*. Numerous colonies of the bacillus were found in the clot which was beginning to organize. The authors point out that though the presence of this germ is common in the organs after death, in this particular case the microbes were contained in migratory cells in process of organization.

Primary Epithelioma of the Uvula.—Dr. Walker Downie (*Scottish Medical and Surgical Journal*, January) reports, in view of the acknowledged rarity of this condition, a case of epithelioma arising in the uvula.

Pseudo-tuberculosis of Feline Origin.—M. Galaville (*Nouveau Montpellier médical*, January 1st) concludes as the result of a series of experiments, the details of which he records, that there is probably existent in felines a bacillary tuberculosis analogous to those which have been described under the name of pseudo-tuberculosis of the guinea-pig, mouse, rabbit, and sheep. The brain of a cat was used for inoculation, and from it this disease was produced in two different species of animal, thus eliminating the hypothesis of coincidence. The author has also reproduced the disease in many cats.

The Treatment of Subinvolution of the Uterus.—According to the *Indian Medical Record* for December 16th, Dr. Baldy teaches that in a slow involution of the womb after miscarriage or abortion, as well as in subinvolution after labor, the daily irrigation of the uterine cavity with a gallon of a mild alkaline antiseptic solution of a high temperature, 110° to 115° F., promotes prompt involution.

Osteoma of the Brain. M. Leclerc (*Lyon médical*, January 14) recently, presented to the National Medical Society of France, a portion of an osteoma from a patient who had infantile hemiplegia and hemisthesia. The

autopsy showed an osteoma of the left optic thalamus. The patient succumbed to a recent softening of the opposite cerebral hemisphere. The hemisphere on the side containing the osteoma was greatly diminished in volume. There did not appear to be any atrophy of the cerebellum. In response to M. Destot, M. Leclerc said that chemical analysis proved the tumor to consist of osseous tissue. The microscopical examination was not yet completed.

Fear Neurosis.—Dr. Morton Prince (*Boston Medical and Surgical Journal*, December 22d) describes under this term a condition in which, although the symptoms are the natural physical manifestations of fear, nevertheless they are not accompanied by this emotion, but exist independently of any psychical state as a group of pure physical symptoms. Hence the term phoboneurosis is more exact than phobopsychosis.

Two sets of causative factors, he says, must be distinguished:

1. A natural or excessive timidity at the beginning, in consequence of which certain external conditions have repeatedly excited fear and its physiological manifestations (tremor, palpitation, faintness, etc.). By a constant repetition, as would necessarily be the case with a musician, for example, these physical symptoms become welded together into an automatic process which persists as a true habit neurosis. This may be looked upon as a sort of degeneration of nervous processes by which frequently associated actions become grouped together. Physiologically, this is the same principle by which any art (violin playing, fencing, rowing) is learned; pathologically, it is the basis of many neuroses and psychoses. After a time, as a result of maturer years and experience, the psychical emotion, fear, subsides, but the physiological manifestations persist—an apparent paradox.

2. After the neurosis has become developed the immediate exciting cause of each individual attack is a primary auto-suggestion in the form of apprehension or expectation that the symptoms will come on under such and such circumstances, such as playing in public, and a secondary direct excitation by the act itself in accordance with the primary auto-suggestion. Such, at least, is the theory which seems to him to best explain the phenomena. But whether or not this is the correct interpretation of the genesis of the neurosis, the existence of the neurosis itself is, it seems to him, unquestionable.

The author next describes in considerable detail three cases that came under his own observation, and from these the symptomatic phenomena may be stated as follows:

In the first case, that of a professional singer, thirty years of age, the author was consulted for the following symptoms: Whenever the patient sang in public he was affected with—1. A feeling of "goneness" and general trembling. 2. Throbbing in the head. 3. Palpitation. 4. Perspiration. 5. General weakness. The same group of symptoms always appeared and in the same order. The trembling was objective, so that he could with difficulty hold his music.

The second was that of a professional musician of well-known reputation.

The symptoms of the neurosis in this case began about ten minutes before playing, and continued with exacerbations and remissions during the whole time while playing. When they developed they did so with a rush in the following order: 1. Dryness of the throat.

2. A feeling like that of indigestion. 3. Hands cold and moist. 4. Palpitation. 5. A sort of ataxia or clumsiness of the hands, so that he failed to have complete control over his instrument, in consequence of which he was much hampered in the practice of his art. This was the main reason for asking advice.

In consequence of this ataxia or clumsiness in the movement of his fingers he could not play so well in public as in private. Upon these symptoms followed certain mental disturbances, which were described as a lack of confidence in his ability to do himself justice, self-consciousness, and an irritability of temper.

In the third case, that of a professional man, the symptoms are recapitulated as follows: 1. Consciousness of being looked at. 2. Faintness. 3. Perspiration. 4. Flushing of the face. 5. Confusion of thought. 6. Depression, etc. The first five symptoms are the physiological manifestation of emotion.

The general principles of treatment are of the character of suggestion—as an instance in the case of the last patient, the author's plan was to create artificially in the patient's mind a fixed idea which should comport with the truth on the one hand, and be antagonistic to, and therefore inhibit, the morbid idea and its consequences on the other. To this end the following was written on a piece of paper:

"These symptoms are only physical processes which by habit have become associated together by a previous pathological mental state. This mental state having subsided, the association will subside and I have nothing to apprehend."

This was changed later to:

"I know I am the equal of the others. These symptoms are only physical processes which by habit have become associated together by a previous lack of confidence in my ability. Having now regained this confidence and knowing that I am the equal of others, this association will subside."

This he was told to learn by heart, and to repeat constantly to himself on every possible occasion—when he was alone, as he walked the streets, the last thing before going to sleep, and especially before undertaking his professional work in public.

The result was decidedly favorable.

Endemic Goitre.—Dr. Daniel McKenzie (*Glasgow Medical Journal*, January) thus concludes a paper on this subject:

To sum up, the modern view of goitre is that it is a disease caused by a *contagium vivum*, limited to certain areas for some unknown reason, existing in the soil and reaching man by drinking-water or unclean hands. I should add that the organism when introduced into the body induces an increased demand for thyroid secretion, which the gland hypertrophies to supply. Much has been said of the organism, but does not seem to go so far.

And the proofs I have adduced in favor of this idea are:

1. The gland enlargement is accompanied by no constitutional disturbance.

2. The microscopic appearances of the primary changes are those of a gland hypertrophied and active.

3. Treatment by thyroid is followed by reduction in size of the gland, which stops if the remedy is stopped.

4. The successful removal of a goitre by radical treatment has been followed by symptoms due to deprivation of increase in gland secretion.

Sporadic goitre may also be explained in a similar manner.

Volvulus of the Stomach.—The *Kansas City Medical Record* for January quotes the following from an exchange, the name of which is not specified: Berg (*Centralblatt für Chirurgie*, September 3d) describes two cases of twisting of the stomach upon its axis, the diagnosis not resting merely upon the symptoms which were present, but being confirmed by operation. In both instances the operation was followed by entire success. From the character of the lesion the name volvulus of the stomach seems a suitable one.

Smokers' Teeth.—The *Ohio Dental Journal* for January, quoting the *Weekly Dentist*, says that it has been found that the teeth of smokers are less liable to decay than those of non-smokers. It has also been found by scientific research that *L. pyothrix buccalis* and the other germs found in the mouth are rendered innocuous by tobacco smoke, and it is an established fact that it also entirely destroys or retards the development of the bacillus of cholera, of anthrax, and of pneumonia.

A Bill to Rid Illinois of Diploma Mills.—The following bill was introduced into both houses of the Illinois legislature on February 2d, and we are glad to learn that there is little or no doubt of its passage:

Be it enacted by the people of the State of Illinois, represented in the general assembly, that section two of an act concerning corporations, approved April 18, 1872, in force July 1, 1872, be, and the same is hereby, amended so that the same shall read as follows:

SECTION 2. Whenever any number of persons, not less than three nor more than seven, shall propose to form a corporation under this act, they shall make a statement to that effect under their hands, and duly acknowledged before some officer in the manner provided for the acknowledgments of deeds, setting forth the name of the proposed corporation, the object for which it is to be formed, its capital stock, the number of shares of which such stock shall consist, the location of its principal office, and the duration of the corporation, not exceeding, however, ninety-nine years; which statement shall be filed in the office of the secretary of State. The secretary of State shall thereupon issue to such persons a license, . . .

And, provided, further, that the secretary of State shall not issue charters to persons, associations, or corporations for the purpose of conferring degrees, diplomas, or other certificates of qualification in the science of medicine, pharmacy, or dentistry unless the application therefor is approved by the State board of health, the State board of pharmacy, or the State board of dental examiners, respectively. And, provided, further, that the secretary of State is hereby empowered, and it shall be his duty, to revoke charters issued to persons, associations, or corporations which authorize such persons, associations, or corporations to confer degrees, diplomas, or other certificates of qualification in the science of medicine, pharmacy, or dentistry, upon the recommendation of the State board of health, the State board of pharmacy, or the State board of dental examiners, respectively; such revocation to be accompanied by proof that the said persons, associations, or corporations are conducting a fraudulent business or violating the terms of their charters. And provided, further, that this act shall apply to all such persons or corporations which now are or may hereafter be licensed in

this State, notwithstanding any provisions that may exist in their charters.

Women Nurses in the Army.—A women's committee to secure by act of congress the employment of graduate women nurses in the hospital service of the United States army, of which Mrs. Winthrop Cowdin, of New York, is at the head, has prepared the following circular:

"The war of the past summer revealed the need of a larger and better-trained nursing service in the hospitals of the United States army. Since the trained nurse has come to have a distinct professional existence, there had been, until the war, no such need.

"The lack of any sufficiently expansive or regularly organized governmental provision for the work of women nurses gave ample scope for individual effort, and for each and every voluntary organization to serve as best it could. A vast amount of work was done, many soldiers were helped, many lives saved. As a result of practical, intelligent service, these workers reached clearly defined conclusions as to the need of a better nursing service in the army, and the means by which such service can be secured and maintained.

"A number of women thus informed recently called a meeting to consider the results of their experience and observation, and to embody their suggestions in a plan for future action. The outcome of this discussion was the appointment of a committee to secure by act of congress the employment of graduate women nurses in the hospital service of the United States army.

"The committee was chosen to represent the general interest of the home, the philanthropic interest of recent relief associations, and the professional interest of various associations of graduate nurses.

"It now rests with the intelligence of the country to speak through the congress of the United States and to determine whether or not the continuous service of trained women nurses in military hospitals in times of peace and of war shall be authorized by law and provided for by United States statutes, and by army regulations.

"This committee has drafted a bill, now before congress, which embodies the following general provisions, and also many minor details:

"I. The creation of a nursing service commission, military and civil, a part of which shall be women. This commission to have general supervision of the graduate nurses' service of the United States army.

"II. The establishment of a thoroughly graded system of clearly defined and responsible nursing service by graduate nurses.

"III. This service to be responsible to the surgeon-in-chief in hospitals and to a general superintendent of women nurses in the department of war at Washington, and to the surgeon-general and the nursing service commission.

"IV. The bill does not require that women nurses shall be placed in small military hospitals in times of peace, but does provide for their service in hospitals at the larger posts, and for an eligible waiting list of competent nurses who could be called into immediate service in time of emergency.

"V. The general provisions of the bill, and minor detail concerning the administration of the proposed system, are based upon the belief that a military hospital should be conducted on the principles of knowledge and responsibility which prevail in good civil hospitals, adapted, of course, so as to maintain army discipline and military dignity.

"VI. The committee believes that a soldier in the service of the country should receive the same high grade of nursing care, as well as medical treatment, in a military hospital, which the civilian receives in a civil hospital; and that training in no other profession—even though it be a kindred one—can give the necessary knowledge and command of the countless vital details of the work.

"While acknowledging the efficiency of the hospital system in the past, we believe that the advances made in the profession of nursing include and necessitate the presence of women nurses if the best results are to be insured in military as well as in civil hospitals.

"The committee hopes that this bill will meet with your approval and enlist your hearty cooperation and support throughout the entire range of your influence, and that you will write the committee what you can do to help in the passage of the bill, or, in any event, to assure them of your approval.

"Also, we ask you to write to your congressmen and senators at Washington urging them to give earnest and prompt support to the bill entitled A Bill to Authorize and Provide for the Employment of Graduate Women Nurses in the Hospitals of the United States Army. This bill may be passed alone, or may be incorporated as an amendment to the Hull bill. In either case it will be known as The Woman's Nursing Service Bill, and immediate action on your part will greatly help to carry this important measure. It may be that, in the chances to which all legislation is subject, your influence will save the bill."

Recent Changes in Italian Medical Journals.—We learn that *Lo Sperimentale* is hereafter to be published under the title of *Archivio di biologia*, and that its satellite, *La Settimana medica*, becomes autonomous and in some sense a continuation of the *Rivista generale italiana di clinica medica*.

As Glorious if Less Famed!—Dr. Nicholas Senn (*Journal of the American Medical Association*, January 7th), in a response to a toast at the banquet of the Interstate National Guard Association, after describing *Æsculapius* on the field of battle, said:

"Can you give me a more striking example of genuine patriotism and heroism than the twenty-four hours' work performed by our disciple of *Æsculapius* on the field of battle? If you can not, I can. It is the same *Æsculapius* away from the bloody field in the fever camp. It requires courage to face the enemy on the field of battle. It requires courage to stand up in a rain of bullets and in an atmosphere torn asunder every few moments by shot and shell, but it requires more courage to enter the silent fever camp, with its myriads of invisible foes. The song of the bullet is sweet music compared with the silent, invisible microbes that cause yellow fever, typhoid fever, malaria, dysentery, and camp diarrhea.

"It is a privilege to die a glorious death on the battlefield; no such halo of glory surrounds the deathbed in the fever hospital. It is here that the greatest deeds of heroism are witnessed. It is here where the true, manly courage of our *Æsculapian* hero is put to the severest tests. Let me ask you a plain, simple question to test the correctness of the assertions I have made, a question the significance of which, I fear, is not fully understood: If left to choose for yourself, would you not be more willing to engage in a battle

than to live and work in a camp filled with typhoid or yellow-fever patients? It would take me or any other disciple of Esculapius not long to decide in favor of the battlefield."

Hydrogen Peroxide in Puerperal Sepsis.—Dr. John N. Upshur (*Atlanta Medical and Surgical Journal*, December, 1898), in a paper on this subject, says that his method of treatment in these cases is to first irrigate the interior of the uterus with a normal salt solution, remove secundines or other retained foreign materials by means of the sharp curette, and then again irrigate freely with salt solution. After thoroughly drying with aseptic cotton or gauze, hydrogen peroxide is applied to the uterine cavity by means of a small intra-uterine syringe or an applicator upon which is wound a piece of aseptic gauze or absorbent cotton saturated with the agent. The foam should be removed and fresh applications made until the cessation of foaming gives positive evidence that the uterine cavity has been thoroughly cleansed. This procedure should be practised daily until the temperature falls to normal and remains at that point. This, in the author's experience, always occurs within a week. The author then quotes three cases as illustrative of the efficacy of this mode of treatment:

The rationale of the treatment by hydrogen peroxide is, he says, that this agent causes a rapid oxidation or superoxidation of effete organic matter, thus completing in a very short time what it would take unassisted Nature a dangerously long period to accomplish. It initiates, but infinitely improves and accelerates, the efforts of the human organism to remove offending foreign materials. The advantage of this agent over bichloride of mercury, carbolic acid, and other agents that act chemically, is that it is non-corrosive and non-destructive of healthy tissue. Furthermore, the results obtained from the use of hydrogen peroxide are vastly superior to those obtained by the use of any other agent, so that the author now approaches the treatment of puerperal sepsis with less fear of unfortunate results than he has ever before experienced.

The Ocular Evidence of Hysteria.—Dr. Casey A. Wood (*American Journal of the Medical Sciences*, January) concludes his paper on this subject as follows:

"It must not be forgotten that just as hysteria simulates most organic lesions, it may also be present with them. Patriel, has, among others, recently emphasized this important fact, and has reported cases illustrative of it. The eye is no exception to this rule, but fortunately organic alterations in the ocular structures, as examined by the ophthalmoscope, perimeter, etc., usually speak for themselves, and present characters entirely unlike those of a purely functional affection. In conclusion: 1. Most cases of hysteria present well marked, easily detected eye signs and symptoms. 2. A few ocular symptoms, such as reversal of the relation of the color fields and the field for white, the tonic form of blepharospasm, spasm of accommodation and convergence, and pseudo-paralytic ptosis, may be regarded as pathognomonic of hysteria. 3. Defects of vision (in the absence of refractive errors, accommodative anomalies, and fundus lesions), are, generally speaking, hysterical if accompanied by photophobia and any form of blepharospasm. 4. No examination of a patient for hysteria should be regarded as complete without consideration of the condition of his ocular apparatus. 5. When there is no conclusive external evidence of the nervous pro-

ent, the perimeter should be carefully used, the range of accommodation should be noted, and the ophthalmoscope employed. 6. It should always be remembered that ocular hysteria is common in children and men. 7. Organic disease (traumatism especially) of the eye may accompany purely functional disturbances of that organ."

Congenital Deficiency of the Clavicles.—Dr. George Carpenter (*Lancet*, January 7th) records the case of a girl, aged eight years, in whom both clavicles were found, while making a physical examination for another purpose, to be absent. A brother had a similar condition on one side, and the father had a deformity of the clavicle. The following description of the patient's condition is given:

"Examination revealed the following abnormalities: The clavicles were represented by two small fragments, thin, tapering, and cartilaginous (the Röntgen photograph suggests bony as well), attached by their broader extremities to the sternum. The left was longer than the right, their respective lengths being an inch and a quarter and three quarters of an inch. On the index finger being pressed behind the outer extremity of either fragment the fragments could be dislocated so that their direction was nearly straight forward. In this position a depression of the lower part of the sternum was evident and the sternum was seen to be unusually wide at its upper part. As the child stood upright the shoulders were obviously narrowed; they fell downward and forward, the scapular angles projected backward to a marked extent, and under the acromion was seen a depression as in a subglenoid dislocation. What appeared to be the first rib could be felt with great distinctness on either side, as also the coracoid processes. Between each coracoid process and acromion was a well-developed coraco-acromial ligament, and so apparent were these ligaments that they raised the suspicion of acromial clavicular fragments. The sterno-mastoid muscles apparently had some attachments to the fragmentary sternal clavicles. The clavicular portions of the great pectoral muscles were wanting, but the pectoral portions stood out well when placed in action. The anterior portions of the deltoid muscles were also wanting, as also were the clavicular fibres of the trapezius muscles. The child was thin and her muscles were not well developed, but she was not by any means wanting in power. She could carry the youngest child, a well-developed infant a year old, could push and throw well, and could bear the weight of her body when hanging by her hands. She could approximate her shoulders to an extraordinary extent with the greatest ease."

Anomalies in the Course of Innocent and Malignant Growths.—Mr. W. H. Bennett, F.R.C.S. (*Lancet*, January 7th), thus concludes a paper on this subject:

"A careful study of a considerable number of cases, of which those just described in detail may be taken merely as characteristic examples and not as the entire experience, leads me to the following conclusions: 1. That certain tumors, although not necessarily different in structure, pursue an innocent or malignant career spontaneously. 2. That certain tumors, although in structure becoming either innocent or malignant, are of negative malignancy. 3. That the course of an innocent tumor may change to malignant. 4. That malignant tumors may become innocent by the escape of a certain proportion of the cells which are

growth will prove malignant or innocent in its course. 5. That the clinical behavior of new growths is often a better test of malignancy than microscopic examination. 6. That mental concentration on the part of the patient upon the site of the disease is a distinct factor in stimulating the growth of innocent tumors and in the production of malignant disease in certain susceptible subjects. 7. That in nervous subjects of the type described recurrence of malignant disease after operation is more certain and its growth more rapid than in persons of a placid or apathetic disposition. 8. That evidence is wanting to show that operation in cancerous tumors of the breast which have assumed the condition of negative malignancy is, as a rule, necessary or advantageous. 9. That although the practice of candidly announcing to patients suffering from malignant disease the nature of their complaint is, speaking generally, moral and salutary, it may be modified with advantage in patients of the nervous type already indicated.

"In expressing these views I am aware that some of them may be directly opposed to those held by many surgeons. They are, however, deliberately advanced after due consideration. The time at my disposal is only sufficient to enable me to touch the fringe of a subject of considerable magnitude which those who think it worthy of investigation will, I think, find of unusual interest."

The Treatment of Chancroid with Antistreptococcus Serum.—Mr. James Moore, F. R. C. S. (*Indian Medical Record*, December 16, 1898), in a paper reprinted from the *British Medical Journal*, says:

"From my experience with antistreptococcus serum in venereal sores and their complications, I have arrived at the following conclusions: 1. While recognizing the great importance of early local antiseptic treatment of the chancroid, I believe that if five cubic centimetres of the serum are injected subcutaneously into each inguinal region in cases in which inflammatory bubo is likely to develop, it will prove a good prophylactic measure, and assist in healing the chancroid. 2. If inflammatory bubo has already developed, and the acute inflammatory symptoms have not been present more than forty-eight hours, ten cubic centimetres injected into the inguinal region corresponding to the inflamed gland will cause resolution in the majority of cases. 3. If there is evidence of pus formation the serum may possibly limit the extension of the suppuration, but in this class of case my results have been anything but satisfactory. 4. The serum should always be injected into the area drained by the infected gland, preferably the right and left inguinal region. I have not seen good results by injecting it into remote areas. 5. In phagedenic ulceration complicating venereal sores, this serum would appear not only to neutralize the toxins in the blood, but also to bring about a healthy condition of the ulcer."

The Cause of Ankylosis. In our issue for September 21, 1898, we quoted from the *Railway Surgeon* for July 26th the conclusions drawn by Dr. O. W. Phelps from some experiments made by him with a view to determine this question. In regard to Dr. O. W. Phelps' original article, Dr. A. M. Phelps (*Railway Surgeon*, January 10th) refers to a series of experiments in the Leominster Laboratory made by himself in conjunction with Professor W. Gilman Thompson and Dr. J. C. Cardwell. As a result of these experiments they arrived at the following conclusions:

"1. That a normal joint will not become ankylosed by simply immobilizing it for five months. 2. That motion is not necessary to preserve the normal histological character of a joint. 3. That when a healthy joint becomes ankylosed or its normal histological character changed, it is not due to prolonged rest, but to pathological causes. 4. That immobilizing a joint in such a manner as to produce and continue intra-articular pressure will result in destruction of the head of the bone and the socket against which it presses, as is evidenced by specimen No. 1, Figs. 2 and 3, in which there was present the beginning of destructive changes. 5. That atrophy of the muscles of the limb will follow prolonged immobilization of a joint.

"If these experiments prove that prolonged fixation will not produce ankylosis of a normal joint, that motion is not essential for the preservation of its normal function, then the causes of ankylosis must depend upon pathological conditions and not upon prolonged fixation.

"It is claimed that motion in the treatment of inflamed joints prevents ankylosis. If this is a fact, why do the statistics of joints so treated show that ankylosis and deformity, to a greater or less extent, are by far the most frequent result? The statistics published by Shaffer and Lovett in the *New York Medical Journal* show in thirty-nine cases reported on out of a series of many hundred:

Ankylosis	19
Slight motion	6
	<hr/>
	25
Motion from 10° to 44°	7
Motion to right angle	3
Motion free	3

"The three with free motion were treated during the first stage of the disease. Two were under three years old. There were only two cases without shortening. The splint used was the long traction—one which admits of free motion at the hip joint.

"To test this question still further, I sent a patient with knee-joint disease, which I had nearly cured, to a distinguished masseur for treatment by that method. I had perfectly fixed her joint for one year. The apparatus was removed and she had motion to about thirty-five degrees; no pain; could walk easily. She was attended daily by the masseur, and her leg was flexed and systematically moved and rubbed. After six months I found almost complete ankylosis. An examination made last week determined fibrous ankylosis and only a slight degree of motion.

"The 'ossified' man, so called, paid a masseur to move his inflamed joints during two years of his early joint trouble. The result was perfect bony ankylosis of all the joints which were inflamed.

"The fakirs of India, after twenty years of penance, holding their limbs in one position, quickly regain the normal use of their joints after their religious frenzy has passed (Thomas).

"I have several cases of children suffering from joint diseases which have been immobilized in a portable bed ten, twelve, and eighteen months, the joints of the lower extremities being kept perfectly quiet during the time. Recent examinations demonstrated that ankylosis had not taken place in the normal joints, and the inflamed joints are freely movable. I desire to place these cases on record, to stand by the side of those cases of ankylosis reported, supposed to be due to long rest of the joint."

Original Communications.

TYPHO-MALARIAL FEVER, SO CALLED.

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THE term typho-malarial fever is in common use in many parts of the United States. It is well known in the South, but is not limited to that section. New York, Pennsylvania, parts of New England, and Ohio may be cited as addicted to the use of the term. In Michigan, it is accepted by the State board of health, and in some parts of the State, even in the northern part, it appears as one of the fifteen diseases most prevalent in some years. In different places and by different men the word is used in various senses, that can be placed in three categories. I intend to discuss these in the order of relative importance, as I estimate it.

The three modes are:

1. To denote a combination of malarial and typhoid fevers.

2. To indicate a malarial fever with symptoms of the typhoid state, or, rarely, a typhoid fever, with intestinal lesions, due to the same cause as malarial fever.

3. Aside from the occasional use of the term to cover obvious diagnostic indolence, to indicate a fever thought by the person using it to be distinct from the typhoid fever of writers, though not necessarily due to malaria.

In the following I mean, by typhoid fever, a disease having certain clinical and anatomical features that are clearly described under that term in all the leading works on medicine. Because these are readily available, I omit a repetition. I also purposely leave out of consideration the aetiology of typhoid fever as not essential to the present discussion.

By malarial fever I mean a disease due to and characterized by the presence of the blood parasites described by Laveran. These fevers have protean clinical features, and can be positively recognized only by the discovery of the specific organisms in the blood of the patient. These statements are not universally accepted by the profession, and therein lies one of the difficulties in the solution of the subject. Often I am told by physicians that they consider the therapeutic test better than the microscopic one, or that they think the finding of the malarial parasite at best corroborative of a clinical diagnosis. Thus, in a recent experience where many physicians were diagnosing diseases of all sorts, neuralgia, diphtheria, jaundice, orchitis, etc., as malarial, my request to have quinine kept off until I had made a blood examination was often met with the answer that I could "have half an hour," and usually in such cases the drug was given, without regard to the blood, in large and repeated doses. It is true the parasites are sometimes few or even absent in the peripheral blood, but such cases are

very rare on the whole. More important is the fact that in a hurried examination the parasites may be overlooked. This is sometimes inevitable in practice, but such cases can not be used to enforce views of classification, nor as models of medical method.

The history of the term typho-malarial fever in sense 1 is very interesting, but can only be alluded to here. A combination of the two diseases was believed to occur by many physicians long ago, especially in the South. The condition was described by Dickson and Drake, and somewhat later (1857) by the late Dr. Austin Flint. To the works of the latter we may go for a statement of the views held by him, as well as by many physicians of to-day.

Flint said (*Practice of Medicine*, fifth edition, 1881): "Remittent fever [the relation of which to malaria he had just described] and typhoid fever may be associated. . . . It has been proposed to employ a name denoting the union of the two affections, and the term *typho-malarial fever* has been introduced by Dr. Joseph J. Woodward. I shall adopt this name," etc. (page 1010). "In typho-malarial fever the symptoms distinctive of the typhoid fever are intermingled with those of periodical fever. . . . In some cases the periodical and in other cases the typhoid phenomena preponderate" (page 1013). "Typho-malarial fever is not a distinct type of fever. It is, however, of great importance to recognize the combination of typhoid and malarial fever" (page 1014). The importance here alluded to is no doubt the following: "In typho-malarial fever the periodic element claims the treatment indicated in simple remittent fever. The object is to eliminate this element by means of antiperiodical remedies. Aside from this object, the hygienic and medicinal measures indicated are the same as in cases of unmixed typhoid fever" (page 1016).

As Flint said, the term typho-malarial fever was originated by Woodward. It became well known very rapidly in the civil war through the work of that author, *Camp Diseases*, and filled a want in substituting what seemed a scientific term for such names as "Chickahominy fever," then in use. In 1876, Woodward read a paper on typho-malarial fever at the International Medical Congress in Philadelphia. This did much toward clearing up certain errors attributed to the author, but had a very slight effect on the attitude of the profession to the disease. Woodward did not live to write the chapters on typhoid and malarial fevers in the *Medical and Surgical History of the War of the Rebellion*. Perhaps, with his industry in such matters, he would have been able to make a strong case for the term. As it is, the author of the third medical volume could find in the records only three clear illustrations of cases diagnosed typho-malarial fever. One of these, the writer says, shows no evidence of malaria on critical examination.

We must bear in mind, in studying this subject, a great but unavoidable error entertained by the older writers. Though no longer unavoidable, the error is still held by most of those who at the present time make the diagnosis of typho-malarial fever. The error is this, that from the symptoms of the disease one can conclude its double origin, or, as the older writers would say, its hybrid nature. Down to a time more recent than Woodward's latest utterance on the question, we had little knowledge of the pathology and morbid anatomy of either typhoid or malarial fever. Woodward's knowledge was meagre with the rest, as his book *Camp Diseases* shows. Larger experience with autopsy specimens led him to abandon his early view that there was something specific in the intestinal lesions of typho-malarial fever, and admit their identity with those of uncomplicated typhoid fever. His clinical experience, however, had no similar control, and like most people with insufficient anatomical knowledge he placed too much reliance on symptoms. Thus, after saying that the "big spleens, pigmentary deposits, and other anatomical evidences of malarial complications were of uncertain diagnostic value," he continued: "I can not but see in the periodicity and other clinical evidences of malarial complications proofs of the action of an additional morbid agency, to which I doubt not we must look for one reason of the great mortality of the fever cases in the army." The "other clinical evidences of malarial complications" are mentioned more specifically in the same place as "gastric and hepatic disturbances and ague paroxysms in the convalescence."* In *Camp Diseases* (page 87) they are spoken of as follows: "Tendency to periodicity, icteroid hue, enlarged spleen, tender liver, and gastric disturbance." Of course these statements simply beg the question, but neither Woodward nor his followers seemed to realize the fact, and so it appears necessary to offer a brief criticism.

Down to a recent time periodicity was universally looked on as presumptive evidence of malaria, and even the important work of Murchison, Musser, and many others has not eradicated this idea. It is, in fact, a common occurrence, when one asks why certain cases in practice are called malarial, to be told, "Because of their malarial characteristics," and if one asks for a more definite answer, one is told either that the patient gave a history of chills at some time, or that the temperature has shown great variations.

Now we know that periodicity of great regularity can occur without any malaria, and without any exposure to it. Many illustrations have been published in the last twenty years, and I have communicated some striking examples.⁴ On the other hand, a malarial

fever may be quite irregular in its course, as is also well known. Moreover, periodicity is often claimed without sufficient proof. Patients often say they have had certain periodic fevers which accurate temperature records show to be not at all periodic. So far as the experience of the civil war is concerned, it is often forgotten that the clinical thermometer was not then in use. Any one who has taken temperatures in fever cases knows how unreliable the sensations of the patient and the hand of the physician or nurse may be. Even when the thermometer is used, but at long intervals, the record may be very misleading.

It has long been known that chills may occur in typhoid fever in any stage. Their occurrence in the early stage was noted in some of the earliest descriptions of typhoid fever as a distinct disease, such as those of Louis, Bartlett, and Jenner. Bartlett was aware of the combination of malarial and typhoid fever, so that when he said (*History, Diagnosis, and Treatment of the Fevers of the United States*, second edition, p. 41): "Like most acute diseases, typhoid fever is attended by chills or rigors," we can hardly think he was dealing with mixed cases. In London, also, where in a "typical case" of typhoid fever mentioned by Jenner the patient had rigors on four successive nights in the beginning, a malarial element may reasonably be excluded. So, down to the most recent writers on the subject, we find warnings in regard to the danger of mistaking cases of early typhoid with chills for malarial fever.

In the second stage of typhoid fever chills are not so common as remissions, but both may occur, independently of all malarial influence. The contribution made to this topic by Osler (*Johns Hopkins Hospital Reports*, Part V) is one that should be read by all interested in the study of typhoid fever. I have found both chills and remissions most frequently in the second stage in cases treated by large doses of antipyretics, including the popular quinine and salol, but I have also seen them in uncomplicated cases treated only by the cold bath. (I of course am speaking of the symptoms not due to the bath.) Sepsis should always be searched for in such cases. In one of mine it was brought on by multiple small skin abscesses.

Chills in the defervescence and convalescence are also not uncommon, especially when antipyretics are given, as is often the case in private practice, to make an impression on a stubborn temperature, and the chills and sweats after such treatment often cause more alarm than the symptom it was given for. It is good practice to assume that chills in the later stages of typhoid fever are due to any other cause than malaria, and to look for the cause. Phlebitis and thrombosis are often introduced by chills and fever. I have seen a pure tertian intermittent, with three paroxysms, in the onset of fem-

* *Transactions of the International Medical Congress, Philadelphia, 1876*, p. 332.

⁴ Endocarditis and Intermittent Fever, *Boston Medical and Surgical Journal*, November 7, 1895; Staphylococcus aureus Infection with En-

docarditis simulating Malarial Intermittent Fever, *New York Medical Journal*, January 30, 1897.

oral phlebitis, without evidences of malaria. (The infection originated in northern Michigan, the phlebitis appeared late in convalescence in Ann Arbor.)

Woodward's other evidences of malaria are even less convincing than periodicity and chills. The icteroid hue has been extremely rare in the numerous cases of so-called typho-malarial fever I have seen in the North, as it was among the several hundred cases so diagnosed I saw in army hospitals. Jaundice, usually of more than moderate intensity, was observed in a number of cases as a complication, but none of these cases had evidences of malaria. In the South a sallow tint is not uncommon, and is to be expected there in typhoid fever without regard to malaria, in some cases. The patients I saw in the camps were largely from the North, and I made particular efforts to observe in them an icteroid hue as a control on the symptom of yellow palms, described by Filipowicz (*Centralblatt für die med. Wiss.*, No. 11, 1898). (I may add that yellow palms were present only in a small proportion of cases, but in some were very striking.)

Enlarged spleen—that is, palpable spleen—may be absent in malarial fever, and probably is, in mild cases, as often as in typhoid fever. In general the organ is larger in the former disease, but it is sometimes very large in uncomplicated typhoid fever. One that I removed at Sternberg Hospital from a patient who died on the tenth day was eight inches long, and estimated to weigh one pound and a quarter. There was no gross or microscopic evidence of malaria. The mesenteric glands were unusually large. Typhoid bacilli were cultivated from the spleen by my colleague Dr. Charles F. Craig.

The tender liver of Woodward is also very uncertain as a diagnostic factor, since it is often absent in malaria.

Gastric disturbance (speaking of symptoms) is rare in typhoid fever, and has been rare in most of the cases of so-called typho-malarial fever that I have seen in private practice and in patients admitted to my wards with that diagnosis. But even in uncomplicated typhoid fever, in the North, there are exceptions, and in a recent case in the University Hospital, a mild one with Vidal's reaction and no malarial organisms, there was vomiting in the beginning and there was a tendency to nausea almost constantly up to defervescence. Two things are very likely to cause gastric disturbance—overmedication and faulty diet. Both of these were common in army camps during the recent war, and no doubt also in the civil war. Patients who were kept in quarters, as often happened in some regiments, until they were in the typhoid state, with nothing to eat but the badly cooked army rations, were pretty sure to have irritable stomachs, and those who took the usual doses of quinine, six to ten grains four times a day, also often had gastric complications, up to intractable vomiting.

So the proofs relied upon by Woodward are insufficient. But claims such as he advanced are antecedently

untenable in the light of present knowledge. When Woodward spoke of a hybrid disease he meant a blending of symptoms; but symptoms no longer suffice for classification. In accordance with more modern ideas, such cases as he described are often spoken of as combined infections, but too often without adequate proof of the combination. The proofs are the demonstration of the malarial parasites in the blood, along with evidence, as full as our knowledge permits, of the coexistence of typhoid fever. Eight years ago, in a paper on the Fevers of the South (*Medical and Surgical Reporter*, January 24, 1891), I admitted the existence of combined typhoid and malarial infection, basing my belief on general principles there detailed, and on the cases reported a short time before by Dr. J. J. Kinyoun (*Abstract of Sanitary Reports*, April 11, 1890). (As I have remarked elsewhere, Kinyoun's conclusions are not all convincing, but that he early recognized the combined infection can hardly be doubted.) I went on in the address mentioned: "The question now (1890) is, not whether there is such a combination, but when, where, and under what aspects it appears." I was quite unprejudiced, although my experience, as I then said, had made me look with great skepticism on the current reports. Since then much has been written on the subject, most of the articles, unfortunately, being controversial rather than objective. I have in the meantime made many examinations in suspected cases, but so far have failed to find a case of mixed typhoid and malarial infection. Many of my cases were pronounced typho-malarial fever by physicians of high standing, authors of note on the subject, and convinced of the soundness of their view. In a number of cases autopsies were made, but without revealing a latent malaria. This experience was obtained partly in Texas, partly in Michigan, and more recently in army hospitals in Chickamauga Park, Georgia; Knoxville, Tennessee; and Camp Meade, Pennsylvania. In the latter hospitals I made many blood examinations on patients in cases diagnosed as typho-malarial fever, who still presented the symptoms on which the diagnoses were made, but without success. As a matter of fact, I was able altogether to find only two cases of malarial infection in the camps, and both the patients recovered promptly under relatively small doses of quinine. (No fever after one day's treatment in each case. Both cases were *residues* of malarial disease acquired elsewhere.)

Since knowledge of the blood parasite has become widespread thousands of cases of malarial fever have been carefully studied. Hundreds of cases of typhoid fever have been searched for the malarial parasites, but only a few cases have been reported in which there was a combined infection, and these do not go far toward showing a peculiarity in the clinical picture. Kinyoun said he had observed in the few cases he saw such characteristics as Woodward described, but his report of the cases is too brief to bring conviction to others.

In a case of W. Gilman Thompson's (*Transactions of the Association of American Physicians*, 1894) the parasites were found in the third week of typhoid fever. The temperature was remittent, and there were chills, but it can not be said the case differed much from other cases of typhoid in which malaria could be excluded. Jane-way, in the discussion of Thompson's paper, mentioned a case in which he found the lesions of both diseases, but expressly stated there were no phenomena of malaria. No more painstaking and extensive observations have been made in this field than those of the Johns Hopkins Hospital. Yet Osler, Thayer, and Hewetson found no concurrence of the two diseases, and in typhoid fever following closely after malarial fever they could see no reason for believing in the existence of a hybrid. Laveran's extensive experience has been that neither intercurrent malarial infection in typhoid fever nor typhoid fever following malarial fever has peculiar features. His statement that remissions are not more marked in malarial remittent than in typhoid fever deserves investigations in the typhoid fever of non-malarial localities. On the other hand, the cases of Vincent,* in Algiers, seem to have shown certain peculiarities. The author looks on an earthy tint and an enlarged spleen as diagnostic features of the combined infection, but such cases seem to have formed but a small proportion of all the fevers he encountered.

In concluding the consideration of the first variety of cases called typho-malarial, we find that the belief in a characteristic disease composed of typhoid and malarial elements is not based on sufficient evidence; also, the idea that the two diseases named are frequently associated remains to be proved.

Material in abundance is available all over the country, and it is unfortunate and not creditable to the modern spirit of investigation that so little work is done on it. As I remarked in my report to the surgeon-general of the army, the recent mobilization of troops furnished an interesting field. With large numbers of cases of typhoid fever from all parts of the country, the combination with malaria was certain to occur. The field hospitals were unfavorable for its detection, on account of the universal use of quinine, and the most accurate observations must, therefore, be expected from city hospitals where cases were studied with regard to the questions involved.

While awaiting the results of such investigations, it may be worth mention that a tendency to inaccurate use of the term "mixed infection" seems about to replace the "typho-malarial fever" of the recent past. If malaria is demonstrated before or after a typhoid fever, but not in it, there is no more reason to speak of a mixed infection than there would, in any simple case of pneumonia, to speak of a mixed infection because streptococci were found in the mouth. Enough cases have been

reported to show that malarial organisms may remain latent in the body even during the course of typhoid fever, just as pus germs may.*

Adynamic Malarial Fever, or Typho-malarial Fever of Class II.—The idea of a malarial fever becoming typhoid is old, but changes its expression from time to time. The older writers made no sharp distinction between adynamic conditions and typhoid fever. Even Woodward was in this class, as appears from the following: "The ordinary remittent fever under this influence—i. e., adynamic tendency—assumes a new character, presenting from its very earliest stages a typhoid tendency, which masks to a great extent its real character, and justifies fully the new designation of typho-malarial applied to such cases in this volume."† Woodward was apparently unaware of the difference between such cases and those he discussed more fully in the volume mentioned, and in the International Congress of 1876. Flint admitted the possibility of the typhoid state in remittent malarial fever, and distinguished it from the combination of typhoid and malarial fevers. Besides this view, there exists even now a belief that malarial fever can show not only the symptoms of the typhoid state, but also the lesions of typhoid fever, without typhoid infection. This idea one can hear elaborated in meetings of medical societies, and from more than one army surgeon I have heard explained how the ulcers, mesenteric-gland enlargement, etc., in ordinary cases of typhoid fever, were due to "malnutrition," "asthenia," "depraved nerve supply," etc., from chronic malarial poisoning. This view does not seem to deserve further discussion.

That the typhoid state can occur in malarial fever does not admit of argument, but after considerable study in cases so diagnosed, finding them all typhoid, and after extensive discussion with practitioners in malarial localities, I must reiterate that the condition described must be very rare, and must usually be due to extraordinary combinations of neglect and improper treatment. I have recently seen a case showing how much a malarial patient can stand, and although I do not wish to seem to oppose it to a positive example of the other class, a brief recital may be interesting:

P. A. W., a young volunteer from Michigan, had malarial fever at Santiago in the end of July, becoming semicomatose for three or four days. The fever returned at Camp Wikoff in the end of August. After that there were "dumb chills" every other day for about a month, and all through October there were ague paroxysms almost daily. The chill lasted about an

* Since I wrote this paper a valuable discussion on some experiences with army cases has appeared (*New York Medical Journal*, November 19, 1895). It does not become probable from this that a malarial infection produces any characteristic change in the type of typhoid fever. On the other hand, the fact was brought out, as Laveran has already shown, that the evolution of the hematozoa sometimes seems to be checked by the onset of typhoid fever.

† *Camp Diseases*, p. 10.

* *Le Mercey Medical*, December 1, 1895.

hour, the fever two hours or more, followed by moderate sweating. There were three or four loose stools a day, the result of a diarrhoea contracted at Camp Alger early in June. The patient lived on light diet, such as oatmeal, eggs, baked apples, and figs. For two months he was under treatment by a homeopathist, who told him it was dangerous to stop the chills. I saw the patient on November 1st. He was very pale and weak, but had not taken to bed. The tongue was pale, thin, and broad, without a coating. The spleen extended three finger-breadths below the costal margin, and was hard and painful; the liver, also three finger-breadths below the ribs, in the nipple line, was not painful; no tenderness in the epigastrium or right iliac fossa. The blood was thin and watery, and showed an increase of leucocytes. It contained a few parasites of the tertian form, with typical segmenting bodies at the third examination, just before a chill. There were large numbers of very small endoglobular bodies, with almost invisible pigment grains. During the five hours the blood was examined, these did not become larger than one fourth the diameter of the red corpuscles. Most of them were in the seal-ring stage. Pigment-bearing leucocytes were rather numerous; the pigment in small black blocks. The small parasites were so numerous that two or three could usually be found in every field of the one-twelfth-inch lens. The blood was examined fresh and in dry preparations. Here was evidently a man in whom a severe malarial infection lasted two months, with other depressing conditions, yet there was no indication of a typhoid tendency. Forty grains of quinine, in two doses, in the first twenty-four hours after making the diagnosis stopped the paroxysms, which have not returned in the three weeks the patient remained under observation. The organisms were present for three days. Ten grains of quinine were given at one dose every five days after the last paroxysm.

Scattered through recent medical literature are accounts of cases called malarial, running a protracted course, or even said to closely resemble typhoid fever, and not yielding to quinine. In some of these the malarial organisms were not searched for; in some they were said to be present, but the descriptions given lead us to suspect the observers were without sufficient experience. I have known a surgeon of high rank in the volunteer army who professed to make microscopical diagnoses of malaria, although he was unable to distinguish between red and white corpuscles in fresh or stained blood, and ignorant of the most elementary microscopic manipulations.

Investigations on the malarial parasites have revealed numerous cases of malarial fever beginning like typhoid fever, and in all that I know, unless there were complications, such as other infections, or inflammation of organs, the symptoms stopped within a very few days, usually less than four, after the administration of quinine was begun. The only example of malaria I saw in Sternberg Hospital was diagnosed as typhoid fever by the surgeon in charge, a Southern physician, and accustomed to see both diseases at home. The temperature curve and the symptoms certainly suggested typhoid; it was too early to lay much stress on the nega-

tive Widal reaction. The temperature, however, previously as high as 105.5°, fell at once after giving eighteen grains of quinine, and with it all the other symptoms except anæmia disappeared. The blood showed a double tertian infection of moderate intensity; the organisms definitely disappeared three days after the treatment mentioned, and did not reappear during the subsequent ten days of observation.

My conclusion as to this part of the subject is that an uncomplicated malarial fever resembling typhoid, lasting more than a few days and uninfluenced by quinine properly given, is rare. There are few exceptions to the statement of Osler, that any fever not checked in five days by quinine is not malarial. My own opinion, shared by many experienced physicians, is that five days are not often necessary, three being usually enough to break up a malarial fever, even in the South. If there are well-authenticated cases that contradict this belief, publication of the details would be very useful. In the meantime, such assertions as the following from an anonymous review of Dr. Thayer's book on malaria may be good prophecy, but can not be accepted as evidence: "The term typho-malarial fever is likely to persist as the designation for the low, asthenic fever due to paludism frequently seen in the Mississippi Valley."

The third sense in which the term typho-malarial fever is used is not often encountered. When it is, it is usually easy to discover that no deep-seated belief exists as to the malarial nature of the disease. The term is often used as a refuge in diagnostic doubt or difficulty, often to avoid an admission of the existence of typhoid fever. In this sense it is common in summer resorts in the North. For such reasons, boards of health often require notification as in the case of typhoid fever, and then such names as "catarrhal fever," "gastric fever," or local terms are likely to be used. Very often we find, with such habits, an actual ignorance of the symptomatology of typhoid fever. A regimental surgeon in the late war is said never to take the temperature unless the pulse is over 120, calling everything with hot skin and pulse less frequent than 120 malarial fever. This ignorance of one of the most important features of typhoid fever is remarkably common. As a contrast to this state of affairs, the typhoid state is taken without further question as evidence of typhoid fever, and so we see pneumonia, tuberculosis, sepsis, and the terminal infections of all sorts of organ diseases called typhoid fever by those who give some other name to the latter disease.

In general it may be accepted as a fact that out of a large number of cases of fever called by names not used in ordinary text books, the majority will prove to be typhoid fever. Some may be infections of other kinds, or intoxications of various sorts, but the effort sometimes made to explain them all by the current terms "auto-infection," "uræcædemia," etc., can not stand the test of post mortem examination.

A curious phase of the discussion of typho-malarial fever centres around the severity of the disease. It is often said that a given case or epidemic can not be typhoid fever alone, on account of the alleged mildness of the symptoms. Especially in the South is it maintained that the common protracted fevers can not be typhoid, because of their mildness. So far as my own experience is concerned, I have seen typhoid fever in Texas quite as severe as some of the most serious I have encountered in the North, and I know no statistics large enough, and otherwise trustworthy, to support the assertion of special mildness in the South. I was especially struck by the importance of the personal equation on this question when at Chickamauga, where the typhoid-fever cases reminded me vividly of old experiences in Kensington, Philadelphia, and of the cases treated on the expectant plan in certain German hospitals. I was speaking about these cases with an experienced trained nurse familiar with the disease in New York and Boston, when she said: "This is not typhoid fever. That never has such depression and delirium, such bad tongues and dirty mouths (some had maggots in them on admission), such bed-sores and abscesses." I was reminded of a discussion I once heard in a medical society in the far South. The health officer, who denied the existence of typhoid fever in the town, closed his argument with the following appeal: "Where do you see, in these cases, the dry, cracked, and bleeding tongue, and the flies crawling on the cornea, as in typhoid fever?"

This matter is not a mere discussion about a name. It involves important questions of diagnosis and treatment. Until the careful examination of the patient becomes the rule, and he is treated for his actual condition rather than for the name of his disease, serious errors can best be avoided by discouraging slipshod terminology, as exemplified by the current use of "typho-malarial fever." Often I have known patients to be told they had typho-malarial fever, and advised to eat and walk all they could, "in order to keep up their strength." In one case the patient followed this advice up to the beginning of the fourth week, and almost at the time his physician was trying to prove to me the man had a hybrid fever, not described by teachers of medicine, and certainly not typhoid fever, the patient was having a hæmorrhage which shortly preceded his death from that disease.

A malarial complication in typhoid fever should be recognized if present, like any other complication, and it can be recognized positively only by the blood examination. When found, it should be treated as Flint so tersely explained. If malaria is suspected, but the microscopical examination can not be made, a therapeutic test may be tried, but the method and limitations of this must be clearly understood. It will not remove the fever if the malarial is associated with typhoid fever, so that when the microscope is not used it is necessary to use the quinine with great care, giving neither too

much nor too little, and not keeping up the drug for more than two or three days at a time.

In a case resembling typhoid fever, but really malarial, the microscope is essential to good practice. Without it, quinine may again be used; but if the temperature does not fall to or near normal, with relief to the other symptoms, it is better to stop the quinine altogether. Only when microscopical evidence of malaria is present should the drug be pushed after the third day. It is necessary to add that while symptoms persist the patient should be treated as though he had typhoid fever. So erroneously is the so-called therapeutic test conceived that I have known of patients taking quinine in doses of forty grains a day for three weeks, in order to determine the presence of malaria, each fall of one or two degrees of temperature being looked on as proof of a specific effect. I am well aware that some look on massive doses of quinine as useful in typhoid fever, but considerable observation has convinced me of the opposite view.

As an instructive example of the sort of treatment Flint did not advise, I append the brief history of a case as given me by one of the physicians concerned. The story as I got it had all the brutal candor of truth, and I think I have the essential points:

A prominent man had symptoms of a fever, and a diagnosis of malaria was made. Antiperiodic treatment was carried out for a week without improvement. Treatment was continued, and a specimen of blood was sent to a distant city, in order to have it examined for the Widal reaction, as the symptoms were becoming suspiciously like those of typhoid fever. As the result was negative, the treatment was continued. Another blood preparation gave a similar report, and as the patient was now becoming notably weaker he was sent a considerable distance to the mountains, in order "to drive the malaria out of his system." A specimen of blood at the end of the third week brought the answer: "Suspicious; send another preparation." This was sent, but by the time the answer came, this time positive, the patient was dead.

Such cases as this, and they are by no means rare, show the harm that is likely to be associated with any form of specific treatment, and especially in a disease with so many possibilities in the way of complications as typhoid fever.

TORSION OF THE PEDICLE OF AN OVARIAN TUMOR.*

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ADHESIONS to the parietal and visceral peritonæum—that is, to the abdominal wall, to Douglas's pouch, to the omentum, intestines, and bladder—are the most fre-

* Read before the Section in Obstetrics and Gynecology of the New York Academy of Medicine, January 26, 1899.

quent complications of ovarian tumors. More rare are inflammation and suppuration of the tumor, and still more unusual, bursting of the cyst and evacuation of more or less of its contents (accordingly as the cyst is a monocyte or a polycyst, only one of the compartments of which bursts) into the peritoneal cavity, and the usually resulting peritonitis. Between these two conditions lies the accident which is the subject of this paper—namely, the twisting of the pedicle of the tumor, which presents one of the most curious and interesting features encountered in the development and pathology of ovarian tumors. This phenomenon was first reported by Hardy, of England, in 1845; then by Ribbentropp, of Germany, in 1846; and next by Van Buren, of New York, in 1850, the tumor in the last case being a solid ovarian. Since then numerous observations of this peculiar occurrence have been recorded, mostly by ovariologists, although Rokitsky has published a number of interesting cases first discovered on the post-mortem table in his text-book and in an article in the *Wiener allgemeine Med.-Zeitung*, 1860. A succinct article on the subject from personal extended experience has not, to my knowledge, been written outside of the comparatively brief review of the topic in gynecological text-books.

The pedicle connecting the ovary with the uterus consists of the broad ligament, Fallopian tube, and ovarian ligament, and is usually not more than two inches long and an eighth to a quarter of an inch thick. The larger the tumor, especially if it is a polycyst with thick, viscid or colloid contents, the thicker the pedicle is likely to be, and therefore, even if rather long, the less likely to become twisted. And if the tumor has attained so large a size as to more or less fill the lower portion of the abdominal cavity and to be compressed by its walls, there is then little danger of its being turned on its axis and of its pedicle becoming twisted.

The Fallopian tube is not always included in the twist, which may be directed inward, toward the uterus, or the reverse.

Torsion of the pedicle may thus safely be said to occur and be possible only when the tumor is small and still freely movable in the abdominal cavity.

Two conditions are therefore essential to the production of a torsion of the pedicle of an ovarian tumor: 1. A long, slender pedicle. 2. A small tumor, not larger than a fist, or at most a cocoon. The size of the tumor when removed does not indicate its size when the torsion occurred, for it has grown with each twist.

Further, the tumor must be in the abdominal cavity, for the freedom of motion necessary to torsion of the pedicle is not present when the tumor lies in the pelvic cavity, as is often the case when it is still so small as to find room in its usual location behind the uterus in Douglas's pouch.

What particular agencies are to blame for the rotation of an ovarian tumor is not definitely known. Most

likely the peristaltic movements of the intestines and their frequent gaseous distention play a prominent part in the axis-rotation of the tumor, and probably accidental jars and shocks or a lateral recumbent position of the woman assist in the process.

The irregular shape of multilocular tumors of the ovary; the lateral inclination given to an intrapelvic ovarian tumor as its growth forces it past the sacral promontory out of the pelvic cavity; and the displacement of the tumor by the gradual growth of a pregnant or fibroid uterus, or the sudden emptying of a pregnant uterus, are other factors possibly chargeable with this accident.

In one case of a doubtful abdominal tumor extending from the left hypochondrium to the right iliac region, with sharp inner border and fairly firm consistence, resembling somewhat a malarial or leucoerythemic spleen, while manipulating the tumor at my office, for the purpose of determining its nature, it suddenly slipped from my fingers and made a partial twist. The patient complained of sharp pain and nausea, went home in a carriage, and took to her bed with a quite severe attack of peritonitis. After a week, when the acute symptoms had somewhat subsided, I operated and found a polycyst of the ovary with a single twist of its pedicle, undoubtedly inaugurated by my manipulations. At present I would operate at once without waiting for the acute symptoms to subside. Removal of the tumor would be the best means of relieving the inflammation.

An untwisting of the pedicle may be produced by a reversal of the agencies which caused the torsion, but I have never seen this occur.

The torsion may be either gradual or sudden, either partial or total. The pedicle may be twisted once on itself or several times, until it has become so thin as to appear on the point of breaking. In accordance with the number and tightness of the twists the circulation of the tumor is more or less interfered with, and an acute serous exudation takes place into the cyst, if the tumor is cystic, or the effusion may be bloody, or the walls of the cyst or the mass of the tumor may become oedematous or infiltrated with blood.

As a result of this interference with the blood supply to the tumor and the resulting edema, apoplexy, and serous exudation, the tumor undergoes a rapid increase in size, and the color of its walls changes from a pearl-gray to brown or black. Usually but one twist takes place at a time, each attack being attended by more or less acute pain on the affected side of the sub-umbilical region, by possible faintness and collapse, by moderate distention and tenderness of the abdomen, and by some increase of pulse and temperature. The symptoms are not unlike those of an acute attack of appendicitis, especially when reflex peritoneal irritation, as shown by bilious vomiting, is present, and the pain and distention happen to be on the right side. An error in diagnosis has been made in this respect even

by experienced practitioners, and the error has not been discovered until the abdomen was opened by the usual lateral appendicitis incision.

Ovarian tumors are ordinarily not painful, even on pressure, unless complicated by adhesions or inflammation. Hence, when an ovarian tumor is met with which is of small size, movable and painless on pressure, and which suddenly increases in size, becomes tender to the touch, and loses its former mobility, the suspicion of acute congestion or inflammation of the tumor is justified, and the assumption that the change is due to a torsion of its pedicle is warranted. No other causes known to me are likely to produce such phenomena in an ovarian tumor.

Only small dermoid tumors of the ovary, the pedicle of which is equally liable to torsion,* at times become inflamed and undergo suppuration, probably in consequence of their greater vascularity and susceptibility to bruising, such as may occur during coition, parturition, or the passage of hard scybala, when the tumor is intrapelvic.

Torsion of the pedicle of an ovarian tumor may occur on either side, but scarcely on both sides if there happen to be two ovarian tumors at the same time, as often occurs. This is easily explained, for there may be ample room for one ovarian tumor to rotate, but not for two. At least I have never seen two twisted pedicles at the same time in the many cases of double ovarian tumors on which I have operated.

A curious feature is that often the tumor lies on the side of the abdomen opposite to that from which it sprang. This is explained by the natural impulse given the tumor during the process of rotation; once on the opposite side, its rapid increase in size keeps it there, as well as the adhesions which the inflamed tumor forms to the neighboring organs. The direction of the torsion in such cases is inward toward the uterus.

The *first* result of the torsion, as already stated, is the greater or lesser interference with the circulation and nutrition of the tumor; the *second*, its increase in size from serous or bloody exudation, or from apoplexy into its walls; the *third*, adhesions to omentum, abdominal wall, intestines, or bladder; the *fourth*, gangrene and rupture of the sac, if the tumor is cystic, provided the adhesions do not save the tumor from this fate by supplying the nutrition which has been cut off through its natural channel, the pedicle; the *fifth*, chronic peritonitis, with turbid serous exudation; or, if the gangrenous cyst actually ruptures, acute septic peritonitis and death.

* Of Hsu-en says that dermoid ovarian tumors are particularly liable to torsion of the pedicle, with which assertion my experience agrees. Of thirty-five ovarian dermoids removed by me there were eight with twisted pedicle, or about twenty four per cent. — that is, about four times the proportion of torsion in ordinary ovarian tumors. The reason for this preponderance of dermoid is that they seldom grow to a large size, and, being more or less solid, are more easily rotated than cystic tumors.

During this course of events, unless the tumor is removed in time, the patient is subject to the peculiar toxic effect of ovarian tumors, known as "ovarian cachexia," and to the dangers of resulting chronic peritonitis and ascites with septic temperature and pulse, the former ranging up to 103° and the latter to 120, neither, however, indicating the true gravity of the situation.

The fifth result—rupture of the gangrenous cyst, general septic peritonitis, and death—is fortunately a rare occurrence, the adhesions, which inevitably form if time is given, being usually adequate to the imperfect nutrition of the tumor so as to save it from absolute death.

It is surprising how disorganized such a tumor may become, until it is black in color, and so soft and friable as to break on the slightest touch, and still be preserved from actual putrescence by adhesions.

To this provision is due the comparatively low mortality from this accident, which in our day of early and relatively safe ovariectomy is not allowed to progress undiscovered and unrelieved to its otherwise inevitably fatal termination.

From what has been said it may be inferred that the symptoms produced by the torsion of the pedicle of an ovarian tumor differ in accordance with the rapidity and tightness of the twist, and the number of the attack. If the torsion has been sudden and complete, the symptoms are sharp and acute, and the general distress great. If, on the other hand, the twist is gradual and loose, there may be comparatively little disturbance for a time, and it requires a tightening of the twist or one or more additional rotations of the tumor before the abdominal distention, pain, fever, and general constitutional depression induce the patient to consult a physician. Thus this condition may produce sudden alarming symptoms, or may exist almost unnoticed for weeks and months.

Intestinal obstruction may take place when the gut is adherent to the twisted tumor and becomes rotated on its own axis or sharply flexed in consequence, or when the pedicle of the tumor happens to catch a loop of intestine in its rotations. Fatal cases of this kind have been reported by Hardy, Ribbentropp, and Rokitsansky.

A result of pedicle-torsion which I have never witnessed, but which is mentioned in literature, is the shriveling of the cyst with inspissation of its contents, or fatty or calcareous degeneration of its wall, produced by the gradual shutting off of its blood supply. In such cases the torsion must have taken place gradually and not with such rapidity and thoroughness as occurs in those cases where acute inflammation and gangrene of the tumor ensue.

I have no data as to the mortality from twisted pedicle when not cured by removal of the tumor. I doubt if any such data exist. But I have recorded only

two deaths from twenty-nine operations for twisted pedicle, both from pre-existing septic peritonitis, the cases having been neglected too long before coming under my observation.

Barnes reports two cases of death from septic peritonitis due to twisted ovarian pedicle, occurring during pregnancy, and Moeller one three days after confinement from the same cause. But these are old records, and doubtless there are others in recent literature.

As regards the frequency of twisted pedicle, I have met with twenty-nine instances in four hundred and thirty-eight abdominal sections for ovarian disease, or about six per cent.

As the large majority of ovarian tumors are cystic, single or multilocular, naturally it is usually a torsion of the pedicle of an ovarian cyst with which we meet; but there is no reason why a solid tumor of the ovary might not, under similar favoring conditions, meet with a like fate.

Indeed, there are cases on record where a fibroid connected with the uterus by a long, thin pedicle has become inflamed through torsion of its pedicle and has at last been entirely detached from the uterus and nourished through adhesions. The uterus itself has been so much elongated by the upward growth of a fibrous tumor springing from its upper portion that a torsion of the organ at its naturally slenderest part at the internal os has taken place.

Other tumors attached to the uterus by the same tissues composing the ovarian pedicle may be subjected to rotation and pedicle-torsion. For instance, I have operated in one case of parovarian cyst with twisted pedicle, and in another of ruptured ectopic pregnancy with the same complication. In the latter case the torsion must have occurred before the rupture.

Instances of this kind are undoubtedly rare.

The *diagnosis* of a twisted ovarian pedicle has already been referred to. I will briefly recapitulate its salient features: A moderate distention of the subumbilical region, with greater prominence either in the median line or on either side; rapid formation of the swelling, which perhaps was merely noticed before; more or less tenderness on pressure; tense but distinct fluctuation, with single or interrupted wave accordingly as cyst is single or multilocular; outline of swelling generally distinct, but sometimes diffused; dullness on percussion over area of swelling; tumor touchable through anterior vaginal vault, and continuous with suprapubic swelling; uterus generally posterior to vaginal swelling; fluctuation-wave in vagina continuous with abdominal wave; temperature somewhat elevated, perhaps to 102° ; pulse rapid and small; general depression; anxious countenance. The attack has usually come on suddenly, and may have been preceded at an interval of several weeks or months by a similar less marked seizure attended by severe pain.

If several twists are found on operation, each twist

was probably signalized by an acute attack. If a woman known to have a small ovarian tumor experiences symptoms such as the above-described, the presumptive diagnosis of torsion of the pedicle is justified.

In one of my cases of twisted pedicle the symptoms were those of rapid formation of a movable, hard, nodular tumor in the right middle part of the abdomen, with cachexia and emaciation (all within three months) so marked as to lead to the suspicion of malignancy. The patient was seventy-two years of age, and had rapidly grown so weak as scarcely to be able to be out of bed. Within three months after the removal of the colloid polycyst (which was accomplished in eleven minutes from the first touch of the knife to the tying of the last suture in the abdominal incision) the patient had gained twenty pounds in weight, and is now, eight years later, still in perfect health.

I have seen the twisting of the pedicle of an apparently previously normal ovary produce an oedematous enlargement of the ovary to the size of a large hen's egg, with symptoms sufficiently severe to warrant me in opening the abdomen and removing the ovary. In this case there was no actual ovarian tumor before the torsion. Olshausen says that only one instance of this kind is on record by Rokitsansky, but in that case the ovary was adherent in an inguinal hernia.

The *differential diagnosis* is not always easy, the difficulty being chiefly to distinguish between an acute appendical abscess and an ovarian cyst with twisted pedicle on the right side.

Such a case occurred to me only a few weeks ago. A girl, thirteen years of age, was brought to Mount Sinai Hospital at 3 p. m. with the diagnosis of appendicitis, and was admitted to the general surgical service. On examining her, the house surgeon, Dr. W. M. Brickner, found a tense, prominent swelling of the size of a coconut in the middle of the subumbilical region, and shrewdly questioned the correctness of the diagnosis. He had her transferred to my service, where I saw her on the same day. The history was that the child had two previous similar attacks of acute abdominal pain during the past few months. I found a partly tense, boggy swelling in the anterior vaginal vault (the hymen and vagina readily admitted the finger); the uterus was retroverted and two inches and a quarter deep. A fluctuation wave extended from the summit of the abdominal tumor to the vagina. In spite of the age of the girl, I diagnosed an ovarian cyst, and from the acuteness of the attack, the temperature of 101.5° , and rapid pulse, suspected torsion of the pedicle. The boggy feeling of the vaginal portion of the tumor induced me to hazard the diagnosis of a dermoid cyst, but herein I was mistaken. But on diagnosis of ovarian cyst with twisted pedicle was confirmed at the operation on the following day, when a cyst of the right ovary with a pedicle twisted three times was removed, each twist doubtless representing one of the three attacks

of pain, etc., given in the history. There was a small amount of free serous fluid in the abdominal cavity. The cyst was almost black, no adhesions, and at its lower portion, just above the twist, the cyst wall was cedematous and contained a large, diffuse blood clot, which had given the boggy feel to the vaginal portion of the tumor. The left ovary contained two cystic Graafian follicles which I obliterated by a single puncture in each with a sharp Paquelin tip at red heat, then dropping the ovary. Convalescence was absolutely uneventful; on the fourth day the child was reading a novel. Neither pulse nor temperature rose above the normal.

It is this case which induced me to carry out a long-contemplated purpose to write up this subject.

Curious to say, on the very next day a woman was admitted to the general surgical service with the diagnosis of appendicitis, there being a diffuse, dull mass in the right ilio-chondriac region, with elevated pulse and temperature. On opening the abdomen over the swelling, Dr. Gerster found, instead of the expected appendicular abscess, an ovarian tumor with twisted pedicle, adherent to the abdominal wall.

Several years ago I saw in consultation with Dr. George A. Macdonald a woman with a large, diffuse, dull swelling in the left side of the abdomen, extending from the level of the umbilicus to the left twelfth rib. It appeared to be entirely distinct from the pelvis, the organs of which seemed normal. As she had a moderate rise of temperature, and the swelling was said to have come on gradually, I suspected an abscess in the abdominal wall, or at least connected with it by adhesions. On making an incision over the swelling and dissecting down to it, I found that it was intraperitoneal, and from the color of the sac probably ovarian. The sac was closely attached to the parietal peritoneum, but easily peeled loose after its serous contents had been evacuated. It proved to be not an abscess but an ovarian cyst with a twisted pedicle fully six inches long and as thin as thick white packing twine, and so brittle that it broke as the emptied cyst was delivered. The cyst was of the right ovary, although adherent to the left side of the abdominal wall, where it had been nourished by adhesions. There was no need of ligating the pedicle, as it was entirely bloodless. Recovery was uneventful.

It would scarcely be expected that an ovarian tumor could find space to permit of its being rotated and its pedicle twisted during the latter part of pregnancy; and still I have seen such a case. A year ago I was asked by Dr. A. G. Gerster to see with him a lady in the ninth month of her first pregnancy, who a few days previously had been seized with the symptoms of acute appendicitis—sharp pain, resistance and circumscribed dullness in the right iliac region, chills and fever. Dr. Gerster wished my opinion as to the best course to pursue with regard to the pregnancy, whether it might not be advisable to induce labor and deliver at once, either during or imme-

diately after the evidently urgent operation, in order to avoid the possibility of septic infection of the genital tract or the rupture of intestinal adhesions about the appendicular abscess if uterine contractions should come on soon after the operation. I fully agreed with Dr. Gerster in the diagnosis of appendicular abscess; no other diagnosis seemed possible under the circumstances, and also as to the necessity for immediate operation. But in the light of previous experience (see *Medical Record*, December 1, 1894, where I reported the first case on record of appendicular abscess during labor, and later observations, *Record*, March 23 and October 26, 1895), I recommended an expectant obstetric policy in the hope that Nature would unaided effect normal delivery, adding that in case of need the fresh appendicitis wound could be temporarily closed with sutures under the chloroform anesthesia of labor, so as to avoid any injury to fresh adhesions by the contracting uterus. The patient was transferred to a private room at Mount Sinai Hospital, and Dr. Gerster operated two hours later in the usual manner. To our surprise, instead of the expected abscess, when the peritoneum was incised a black tumor of the size of a large fist appeared which proved to be the right ovary with a tightly twisted pedicle. This was tied, the tumor removed, and the incision closed. Labor came on within twenty-four hours and terminated spontaneously. Recovery was uneventful.

There remains but one more word to say regarding the treatment of an ovarian tumor with a twisted pedicle—namely, that the tumor should be removed as soon as the diagnosis is made, or, if the latter is doubtful, an exploratory incision should settle the question.

It is not safe to expect or wait for the preservative assistance of Nature in furnishing fresh nutrition to the strangulated tumor by means of adhesions, and still less for the untwisting of the pedicle. An early operation promises a speedy recovery, and this may be one of the instances where a good rule is to operate first, and to make the diagnosis afterward.

20 WEST FORTY-FIFTH STREET, December 26, 1898.

ANTISTREPTOCOCCIC SERUM IN EPIDEMIC CEREBRO-SPINAL MENINGITIS.

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PERHAPS I should offer an apology to the readers of the *Journal* for reporting these two cases without waiting for a larger experience with the antistreptococcic serum in the treatment of epidemic cerebro-spinal meningitis, but, as that disease is prevailing in so many places at this time, I think I will report the facts as I saw them, and ask others to assist in finding the true

value, if any there is, of the serum treatment of this disease of such appalling fatality.

CASE I.—On the morning of the 21st day of January, 1899, I was called to see Mrs. S. B., aged twenty-four, in consultation with Dr. T. N. Ellis. Her personal history was negative preceding the present illness, which began at about 11 P. M. on January 19th. She was awakened from sleep by a chill, with intense pain in the head and neck, accompanied by nausea and vomiting. The muscles of the neck soon became sore and somewhat stiff, causing pain in moving the head. Dr. Ellis was called on the following morning and gave a calomel purge, also morphine to relieve pain. At the time of my visit the patient was moaning with pain, her head was slightly retracted, and her neck was stiff. She was semi-conscious. The conjunctiva were red, the eyelids were swollen, the pupils were rather sluggish, but responded equally to light, the face was flushed, there were a few herpetic vesicles around the mouth, the limbs were flexed, and the right knee was painful and swollen. The temperature was 100° F.; pulse, 60; respirations, 34. The bowels had been moved by the calomel, and urine was passed naturally and without difficulty.

The diagnosis was that of cerebro-spinal meningitis. A mustard plaster was applied to the spine and ten drops of a saturated solution of potassium iodide were ordered every six hours, with a quarter of a grain of morphine as often as might be necessary to control restlessness and relieve pain. A milk diet was ordered, and water was given at regular intervals. Under this treatment the conditions remained practically unchanged until the evening of the fifth day of her illness, when she rapidly grew worse in every way. Her pulse ran up to 160 and her temperature to 102.5° F.; the respirations became shallow and very irregular; and there were muttering delirium, complete unconsciousness, and involuntary discharges from the bowels and bladder, the *tout ensemble* indicating an early dissolution.

I had in the preceding few weeks seen other violent cases of the same nature, and was painfully aware of the futility of the ordinary methods of treatment, and, while meditating over these facts, had concluded that in the absence of a specific serum like that of diphtheria benefit might follow antistreptococcic-serum injections, inasmuch as the *Diplococcus intracellularis meningitidis* is found almost exclusively in the multinuclear leucocytes, as the exudate is composed largely of multinuclear leucocytes, as this leucocyte plays an important rôle in the formation of purulent collections, and as pus is a pathological factor of such prominence in cases of death from meningitis after a few days' illness. I concluded to try the serum in the next case that I regarded as hopeless, and had ordered and received from Parke, Davis, & Co. a supply of their product. I did not use the serum earlier in this case because, so far as I know, I was the first to try it in meningitis, and I did not have the courage to experiment on a human being so long as I could see a ray of hope for recovery.

On January 24th, at 7 P. M., which was the fifth day of her illness, I injected ten cubic centimetres of antistreptococcic serum into the subcutaneous areolar tissue

of the abdomen, and advised Dr. Ellis to repeat the dose at his morning visit if the patient lived until that hour. A thirtieth of a grain of strychnine was to be given every three or four hours, and an ounce of whisky every two hours if she could swallow it.

On the 25th, at 8 A. M., Dr. Ellis gave another injection of ten cubic centimetres of the serum and ordered the strychnine and whisky continued as before. I saw her at 4 P. M., and was astonished to find her perfectly rational and calling for food. Her respirations were 20, her temperature was 98.5° F., and her pulse was 106. The pain in the head was very much easier, the neck was still sore and stiff, but the head could be moved from side to side without pain. Another injection of ten cubic centimetres of serum was given and the strychnine and whisky were continued. From that time to this she has had a slow but satisfactory convalescence, except for occasional headaches, which annoy her, and a decided constipation, to which I attribute a part of her headache. There was no eruption at any time except herpes labialis.

CASE II.—P. P., a teamster, aged twenty-two, had a chill late on Sunday evening, February 5th, followed by severe headache, vomiting, great restlessness, and wild delirium. So great was his excitement that it required two men to hold him in bed for several hours, on Monday the 6th, notwithstanding his physician, Dr. Barr, had given morphine freely. I saw him in consultation at 8 P. M. on the 6th, after he had been ill about twenty-four hours. He was lying on his left side in deep coma, with the limbs flexed and in tonic spasm, the head retracted, the neck as stiff as a rod, the face flushed, the conjunctiva congested, the pupils contracted, the eyelids swollen, and the jaws closed like a vise. The temperature in the axilla was 97° F.; pulse, 80 and weak; respiration, 36; the trunk was thickly studded with petechia and purpuric spots.

The diagnosis was that of cerebro-spinal meningitis of the fulminant type.

An injection of ten cubic centimetres of antistreptococcic serum was given, and hypodermic injections of a thirtieth of a grain of strychnine were administered every four hours.

On the 7th, at 8 A. M., the patient was rational and expressed himself as very comfortable. The headache had ceased, and he could move the head without pain, but could not bring the chin forward. He said: "The leaders are too short." The muscles of the extremities felt sore and weak. The bowels had acted from ten grains of calomel given twenty-four hours before; the bladder acted freely; pulse, 104; temperature, 99° F.; respirations, 26; facial appearance unchanged except that the pupils were dilated, but responded slowly to light. Another injection of ten cubic centimetres of serum was given. Milk diet was ordered, and he was to take water when he desired it.

Two persons with the fulminant form of the disease had died in his vicinity three or four weeks before, one in twenty-five and the other in about thirty hours. One of them was under my care, and the symptoms were precisely like his. Like him, they were strong, healthy men in the full vigor of robust manhood, and the change in this patient's condition was a marked and so in contrast with theirs that I invited my friend and colleague, Dr. Campbell, of the First Tennessee Hospital for the Insane, to visit him with me, which he did at noon. At this time he was wonderfully improved in appearance and wanting to sit up in a chair. He raised

himself up and turned over in bed with perfect ease to show Dr. Campbell the purpuric spots on his back, and expressed himself as feeling quite comfortable.

At 6 P. M. he said he did not feel so well and complained of weakness and dizziness. His nose was bleeding a little and I noticed that the blood was very pale and did not coagulate readily; respirations, 30; temperature, 98° F.; pulse, 110. A thirtieth of a grain of strychnine was given every four hours and an ounce of whisky every two hours was ordered. Another injection of ten cubic centimetres of serum was given.

On the 8th, at 8 P. M., he was very restless and semi-conscious, the face was pale, the eyelids were swollen, the conjunctivæ were red, and the pupils were dilated and unequal. The right one responded slowly to light, but the left one did not. His head could be moved by the attendants, but it caused him to wince. The right arm was completely paralyzed, and the right leg partially so. The bladder was full of urine, and twenty ounces were withdrawn by a catheter. Respirations, 20; temperature, 97.8° F.; pulse, 80, slow, hesitating, full, but very soft and compressible. He swallowed with difficulty. He became quiet after the use of the catheter and remained so for several hours until the bladder re-filled. Strychnine was continued, and the juice of a lemon and four ounces of whisky were ordered, in teaspoonful doses, every half hour if they could be swallowed. The serum was discontinued, as it was not thought possible for it to relieve the cerebral hæmorrhage which I believed had occurred.

At 6 P. M. the coma had deepened and the right leg was completely paralyzed; the pupils were dilated and fixed; the dilatation of the left was still greater than that of the right; there was opisthotonus, and the head inclined to the left side; the temperature was subnormal; pulse, 130 and thready; respiration irregular and noisy. Fifteen ounces of urine were withdrawn by the catheter. The strychnine and whisky were continued.

On the 9th, at 8 A. M., the patient was in deep coma, with rapid and noisy respirations; pulse, about 160 and very feeble; temperature not recorded. Opisthotonus increased and the head was drawn to the left. The pupils were widely dilated and paralysis of the lower extremities was complete. Sensation and some motor power remained in the left arm. The bladder was full of urine. Thirteen ounces were withdrawn by the catheter. Death occurred a 12.45 P. M. An autopsy was not allowed.

From the foregoing reports I am inclined to the following conclusions:

I. The antistreptococcic serum has a decided stimulant effect on the nerve centres in meningitic coma, but the same results might follow a warm, saline hypodermoclyster.

II. It probably increases phagocytosis and in this way has some antidotal effect on the *Diplococcus intracellularis*.

III. It probably prevents purulent infection of the exudate, and thus lessens the danger in all cases in which the patients survive the first three or four days.

IV. From my observation of these cases I am quite hopeful that an antidiplococcus-intracellularis-meningitidis serum can be produced which will have a decided effect in controlling the terrible toxæmia of meningitis,

and that the associated effect of antistreptococcic serum after the second day will assist in preventing streptococcic infection of the exudate.

V. I am well aware of the fact that the improvement which I saw in these cases may have been a coincidence and not due to the use of the serum, but if it was it was entirely unlike anything I have ever seen before in such cases.

VI. I am satisfied that in Case I the patient would have improved faster if the serum injections had been continued daily for several days longer, and, if I should meet with another case like Case II, I would give from forty to sixty cubic centimetres of the serum in the first thirty-six hours.

THE TREATMENT OF NORMAL LABOR.*

By S. MARX, M. D.,

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THE line of demarcation between normal and abnormal, or, more properly speaking, physiological and pathological labor, is one so sharply defined that it is absolutely impossible, in many cases, to state where the former ends and the latter begins. It is customary to call labor a physiological process. To this I agree in the broadest sense of the term, for the sole reason that the efforts of Nature in an otherwise healthy woman is, or should be, always a physiological process. But further than this I can not go. Obstetrics as taught in the lecture rooms and from books is always beautifully graphic, terse, and to the point; but how different is the case at the bedside of the parturient woman! Who can ever possibly certify that this so-called physiological act may not at any moment carry the woman and her child into the gravest and most desperate states? Why do all women dread childbirth, even as did patients about to be operated on in the preanæsthetic days? Does Nature produce such agonizing tortures in fulfilling her other physiological functions? Is not pain in itself incompatible with such normal functions? To make labors absolutely painless is beyond us at present. Such periods could be called "Utopian periods"; but this ideal, the Utopian period, has not as yet arrived. Surely, and I have the greatest hopes that the next century will see this, not through making "labors" an elective measure, such as we are in a position to do to-day by general anæsthesia, but by direct action in the vital uterine nerve centres, to be reached by a cataphoretic current, diffusing to those centres and benumbing them by some analgetic measure or other. Therefore, to call labor a physiological process is wrong, and the longer I practise midwifery the stronger grows the belief, nay, the conviction, that we are dealing with a pseudo-physiological condition strongly tending to and always verging on a pathological state.

* A paper opening a discussion before the Metropolitan Medical Society, December 27, 1898.

and we never can know when the one merges into the other. We must presuppose that the woman has been carefully watched during pregnancy; her kidneys, liver, skin, etc., have all been attended to, the pelvis carefully and thoroughly measured, and its size estimated, the adaptability of the foetal head to the maternal pelvis accurately judged. All this attended to, so that the woman, *not* the patient, goes into labor in the best possible condition of health. Thus we are prepared to attend a woman physically and physiologically well in a time every moment of which, like Sherman's description of war, is hell. What are the duties of the accoucheur? Is he the perfunctory individual of whom the average layman, and I am ashamed to say, even the physician, speaks of tersely. Any one can deliver a woman. What is there in obstetrics? Ah, gentlemen, "here's the rub!" No physician is better than a bad one. The highest duty of the accoucheur is not to deal alone with prophylaxis as to present states, including sepsis, lacerations, etc., but to place the woman in so perfect a condition, and to make that condition so permanent a one that her health is as good after as before the accouchement. And what is the secret of this success? It is explained in one word—"asepsis." I fully realize the difficulty to be encountered in approaching this subject, in the light of the much-mooted discussion as to the bacteriological findings of the parturient vagina. Naturally, bearing strongly upon the subject now advanced, is the status of the vagina on the one hand, and the condition as to surgical cleanliness on the part of the attendants, paraphernalia, etc., on the other hand. From a vast amount of scientific research we must presuppose the larger number of "parturientes" to have a vaginal secretion, which possesses to a decided degree an inhibitory action which bears directly on pathogenic organisms—i. e., streptococci, staphylococci, etc. A secretion which possesses such qualifications obtains in the normal vagina at all times. This secretion is acid to a marked degree, sticky, and gelatinous. Its inhibitory action depends upon the presence of lactic acid produced by *Dodlein's bacillus*. When we find such vaginal secretion present, which can be proved clinically by sight and touch, we have the vagina prepared sufficiently, without artificial preparation, to conduct labor scientifically; and under these conditions no ante-partum douches, scrubbing, etc., are allowable, for if such means are employed the possibility of producing an infection, or the destroying of Nature's protective means are ever present. So firm is my confidence in the ability to destroy, on the part of Nature, every possible pathogenic germ that may be introduced by operative interference, that when the asepsis of the operator can not be questioned, there never is allowed a uterine or vaginal douche, either before, during, or after the interference. Different is the condition when, from bacteriological evidence, this inhibition does not obtain. Under the conditions we have a vaginal secretion which is alkaline in

reaction, profuse in amount, malodorous, and purulent. Here we have to deal with what in most cases is a gonorrhoeal infection. Thus the indication is to treat before and to anticipate the labor by prophylactic douches, profusely and repeatedly given; and if, when labor sets in, and the discharge is not the normal one, surgical scrubbing, even as is done before a major vaginal operation, is distinctly called for. The use of green soap, alcohol, and bichloride is the *rigime*. Approaching the accouchement of a healthy woman, what subjective preparations from a modern standpoint are to be taken? No vaginal douches are allowed before, during, or after labor. The external genitalia are thoroughly scrubbed with soap and water, and this very briskly to insure mechanical cleanliness; this is followed by washings with dilute alcohol, and again rinsed with a bichloride solution, 1 to 2,000. The strictest attention must be paid to the hands of the examiner: for since we have so strongly asserted that a healthy parturient is antiseptic or aseptic, there can be only one source of infection directly or indirectly, and that the accoucheur and from without. Self-infection is so rare that it hardly has a bearing on the subject. The average hand-cleaning performance of the practical physician is more in the line of an "opera-bouffe" than anything else, a veritable parody, and an insult to the memory of Semmelweis and Lister. There should be thorough surgical scrubbing, mechanical and chemical, by what means I care not, but let it be thorough. The method I employ in hospital and private practice is to use, step by step, green soap, ninety-five per cent. alcohol, and 1-to-1,000 bichloride solution, and the scrubbing is rigidly and carefully done by a sterile brush. Where I have recently come in contact with a septic case, a thorough permanganate-of-potassium-and-ovalic-acid scrubbing is gone through with at home. Now, as to the manner of examining the patient. This is a step which I know may carry me on dangerous grounds. The school of obstetrics is to-day divided into two classes: those that believe in conducting a case entirely by external methods—the so-called abdominal palpationists—and again those who would have us employ both external and internal examinations. With the latter I throw my entire weight of experience. The German school originated the external method, alleging for it a reduction in both the mortality and the morbidity rate. This, from observation of their own records and our own hospital records, I absolutely deny.

Further, they state that in ninety-five per cent. (the exact percentage I can not remember) of their examinations the diagnosis of position and presentation was correctly made by simply "laying on of hands." This is certainly grand and true as far as it goes, but when one recollects that in ninety-five per cent. of all cases both presentations and positions are correct and normal ones, I can not for the life of me understand why such glorification attaches itself to a method which, to my mind, means lack of confidence and trust on the part of the ac-

coucheur. It means simply that these men do not trust their own hands. A practitioner who does not know how to render his hands clean has no moral right to practise midwifery; and, on the other hand, a physician who *can* trust his own asepsis, can introduce his hands, not once but a thousand times into the vagina, even as the abdominal surgeon can trust his as well as those of his assistants in his particular field of operating; for, is the vagina more susceptible to pathogenic germs and to infection than the peritoneum? It is my invariable rule to examine as often as is necessary and consistent with the welfare of the mother and child. When the condition demands it, as, for instance, in guiding an occipito-posterior position to an anterior one, I do not hesitate to keep my fingers, if necessary the hand, in the vagina for half an hour or longer. It is also an invariable rule to make a diagnosis of the presenting part, and if the case is at all dark, there is absolutely no hesitancy in introducing the clean hand into the uterus for purposes of exploration. It must ever be remembered that the presence of a head as the part in contact with the examining finger does not mean that everything is all right, but I fear that the ordinary practitioner in his formal examination always rests satisfied so long as the hard, round head is felt as the advancing part. There is such a thing as a malposition of a normal presentation, as witness an occipito-posterior case, and here I am not backward in stating that more trouble and chagrin, more fever, more deaths occur as a result of this complication than any other in the entire domain of obstetric surgery.

As to the position of the patient during active labor, especially during the second stage, it behooves me to state that after careful consideration of the subject in a great many labors, I have found that the labors were much shortened and more rapid when the patient was placed on that side corresponding to the position of the presenting part, and the rationale of such postural treatment was thought to be the overcoming of the ever-present uterine obliquity, thus favoring, and to a marked degree influencing, either the flexion or extension depending on the presence of a face or vertex presentation. Even when the head begins to distend the perineum the side position is favored. In our ordinary soft beds the buttocks sink so deeply in the dorsal posture of the patient, that more often than not the perineum is with difficulty seen, and thus its management is materially interfered with, while with the woman on the side the entire perineum can be seen and manipulated with ease. Further, in the side position the occiput of its own weight is thrown forward and liberates itself thus more naturally and more readily than when the patient is placed on the back. It is at this stage—that is, when the head reaches the pelvic floor—that drop doses of chloroform are gradually given and increased, but only during the pain, so that when the head has cleared the perineum the patient is fully narcotized to the obstetric degree.

The most important question now comes up for discussion—namely, the perineum, and its care. The old term, supporting the perineum, is a misnomer and a misleading term, since the greatest success in the preservation of the perineum is attended by not touching the perineum at all, literally speaking, but by managing the head in such a fashion as to produce continuous flexion of the head to the point of superflexion, if necessary forcibly liberating the occiput and clearing it from beneath the symphysis, and in this fashion engaging the nape of the neck, or, properly speaking, the suboccipital point, underneath the symphysis, before the attempt is made to extend the head. We thus liberate a small diameter of three inches and three quarters, the suboccipito-bregmatic, for one in an improper mechanism of five inches, the occipito-frontal. Thus it is that the mechanism of perineal preservation is due not to supporting that part, but to its management. We may be asked whether, sticking close to this method, we have ever torn a perineum? and the answer to this is, Yes, hundreds! There is no man living who has not had his share of perineal tears, and among my own, I must say, there have been many small and large ones. Proud I am to admit it, for the reason that I have delivered a great many hundreds of women, and I always look for lacerations both externally and internally. Those who never have had any lacerations can be thrown into three classes: 1. Those who have never had a labor case. 2. Those who never look for them. 3. Those who hate the truth. Where there is danger of a laceration, a large experience has taught that bilateral episiotomy will not prevent its occurrence, and, on the contrary, the advancing head will tear these two superficial incisions further and produce a large irregular tear on either side. In one case, on one side the ischial tuberosity was exposed. My method is to fully dilate by cutting the vulvar orifice completely by a deep vulvo-vaginal incision, nothing more or less than a deep unilateral episiotomy. Thus we get a clean surgical wound readily sewed up, in place of two irregular ragged tears, as produced by the superficial incisions. When the perineum already begins to tear, or acts like wet blotting paper, the quicker the head is extricated the smaller the tear; since these lesions are produced by pressure against the perineum; an artificial anemia becomes evident, with a consequent rapid sloughing of the parts.

Finally, we come to the treatment of the third stage of labor. As soon as the fetus is born, the cord is tied in a fashion original, I think, with me. Three ligatures are used, two at the usual site. The cord is now carefully pulled upon until it is taut, and at the point of exit at the vulva another ligature is placed. Its object is thus explained: The placenta can not move without pushing the cord before it, so that the position of the third ligature tells me exactly where the placenta is. If the ligature is still at the vulva, the placenta has not moved; if three or four inches from the vulva, the pla-

centa must be in the vagina. This may at first appear an unimportant prophylactic measure, but I have been so often called to remove an adherent placenta only to find that mass in the vagina or cervix, that a measure of this kind will at least prove that an adherent placenta is one of the rarest of all obstetric complications. Since placental separation begins with commencing active uterine action, it is my custom to attempt to express with the first good pain following the birth of the child. Where a perineum is torn, an almost invariable custom is to sew up at once, tie temporarily, remove the placenta, and then permanently place the sutures. These parts are thus so obtunded from the pressure and the superficial narcosis, which has not time to wear off, that the needle pricks are hardly felt. Where the afterbirth does not readily follow, successive Credé manipulations are performed with each uterine contraction. Where this does not suffice, a modification of Kristeller's procedure is always successful, except in those cases, fortunately very rare, where there is total adherence. In the Kristeller method of expression both hands are used together, each separately doing the simple Credé manipulation, the thumbs being in contact, the operator facing the patient.

This outlines in general the treatment of normal labor, and I am cognizant of the fact that much should be added to make this article complete. To fully detail all the nice points and useful devices which it would be my pleasure to add, would necessarily lengthen this article to the dignity of a text-book. But this is simply impossible, and my only hope is that this can be successfully added to by the many gentlemen present, who are or at one time or other have been interested in the much-neglected art and science of midwifery.

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SPASM OF THE TENSORS OF THE VOCAL CORDS.*

By JOHN EDWIN RHODES, M. D.

MACKENZIE (1), in 1880, was probably the first to accurately describe this condition, although Schmitzer (2), in 1875, Schech (3), in 1879, and Prosser James (4), in 1879, reported cases which manifested some what similar symptoms of a spasmodic character. I find on consulting the literature of the subject that these spasmodic affections of the larynx have been treated of by different writers, as "stammering of the vocal cords," "spastic aphonia," "spastic dysphonia," etc. I believe they may be classed together, and, although the cases which I shall report may properly be classed under the title given by Mackenzie, it would, perhaps, be preferable to place all similar cases of spasmodic affections of the larynx under the uniform title of "dysphonia

spastica" (5). It is certainly a rare affection. Mackenzie saw but thirteen cases. I have found a few on record besides those mentioned above. Among these, Michael (6), Heyman (7), Oltuszewski (8), Massuci (9), Landgraf (10), Onodi (11), Rethi (12), Knight (13) have reported cases most of which differ materially from those I shall report in their manifestations. In many the affection seems due to an abnormal use of the voice or to its overuse, but it may be manifested only after many years of such use, and it is possible that some neuropathic condition which is not well understood is the cause of its development. Landgraf believes that degenerative processes of the nervous system (*e. g.*, multiple cerebral sclerosis) are important etiological factors. Fraenkel (14), Michael, Schech, and others suggest that it is an occupation neurosis similar to writers' cramp. Krause (15), in reporting a case of aphonia with dyspnea (laryngeal) spastica, arrived at the conclusion, from the history and status of the case, that it was one of incipient multiple sclerosis. Catching cold has been named by Mackenzie as an apparent cause of the complaint in some cases coming on suddenly. Oltuszewski has reported cases connected with nasal affections which were relieved by treatment of the latter. Browne (16) believes it a common affection, considers it neither of neuropathic nor myopathic origin, but a result of improper voice production dependent upon wrong breathing while speaking. No post-mortem examinations have been reported, and it is probable that the pathological changes would be of too obscure a character to admit of satisfactory study.

The symptoms in these cases appear on every attempt at phonation. The whisper voice is usually perfect. The speaking voice is feeble, husky, wavering, and jerky, with perhaps change from low to high tones frequently in the attempt to speak more clearly. In the beginning there may be simply a difficulty in getting started, and after speech has been in progress for a time the tones may be clear and unwavering, or there may be the involuntary break in phonation only after speaking for a time, the voice changing to the high-pitched, jerky voice, as in Knight's case, reported to you in 1896. In Schmitzer's case there was complete aphonia and dyspnea in speaking only, accompanied with some facial spasm. In Schech's case there was some pain and oppression felt in the throat in speaking, and finally complete aphonia, and in another case the voice, at first normal, changed to falsetto, followed later by aphonia, accompanied with spasm of the vocal muscles. In the Prosser James case there was an intermittent loss of function of the cords during severe colds, and whole sentences were dropped immediately. In Michael's case there was loud stridor on inspiration, and a hoarse voice, and also dyspnea. Finally, in the last case which was relieved of dyspnea, and the voice becoming normal. This fact seemed to prove the existence of paralysis, not of paralysis. One of Michael's cases was a female

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singer troubled with hoarseness. Here the abduction of the cords was found normal, but in adduction, on the slightest effort at vocalization, the glottis was completely closed and no rima glottidis could be seen. Landgraf has given the record of a woman in the later stages of pulmonary tuberculosis. There was apparently a participation of the diaphragm in the glottic spasm. Onodi recites a case in a hysterical girl with loss of voice and difficult breathing, relieved by ether and cured by hypnotic suggestion. Rethi reported an instance last year of a female singer whose voice "stuck" as she tried to pass from one register to another, and a laryngoscopic examination showed at the moment of change an elongation and tension of the cords with scarcely a perceptible separation and no tone produced. In this patient he thought there was a reflex starting from the nose, and the higher register muscles were affected.

Dr. E. Fletcher Ingals and myself have observed five cases, the reports of which are as follows: Three of these I have recently had an opportunity of studying carefully.

CASE I.—S. O. J., clergyman, native of Scotland, aged fifty-six years, gives the following history: His father, who was a miner, died at eighty-one of old age; his mother at about thirty-five of consumption. He has no full brothers or sisters. His father was deaf and dumb, as were his father's brother and sister. Two of his mother's brothers were stammerers. These are interesting facts. He has two half brothers who are healthy and have no abnormality of speech. He was rather a frail child, and during his early life endured many hardships, doing severe labor in the mines and having insufficient food. He has been usually healthy, with the exception of an attack of yellow fever eight years ago, and at that time suffered from nervous dyspepsia. Since then he has also had yearly attacks of hay fever, beginning in the middle of August and continuing until cool weather. His temperament is markedly neurotic, but the strain of an exacting position always increases his nervous symptoms. Since the inception of hay fever, until recently, he has used freely as a spray several times a day, and sometimes much more frequently during the summer, a solution containing ten grains of cocaine and ten grains of boric acid in eight ounces of water. He has always had some dread of public speaking and feared that at some time his voice might suddenly fail him. Realizing that his voice had not carrying power he raised its pitch, and spoke with greater force. There was, however, little difficulty in speaking until a year and a half ago. This came on gradually. In the beginning there was huskiness of the voice and slight difficulty in public speaking, very little in ordinary conversation, but often the voice became clear after a few moments' use. No dyspnoea has ever been present. Soon he found that by changing the pitch to high tones he spoke with less effort and the voice was clear. Since August, 1897, there has been more interference with speaking in the chest tones. Speaking does not tire the throat greatly. Early in the history of the case, in beginning a sentence he often found that with the first effort to speak aloud no sound was produced, and it was necessary to attack the sentence again. After his diagnosis was under way,

and his attention was entirely occupied with the subject in hand, he spoke easily. Later his voice became unsteady in the chest tones in all attempts at phonation. Now, in conversation, the voice is slightly husky and repressed, is tremulous, jerky, and strained in character and irregular in pitch, the sentences being often preceded by a very full inspiration, as he had found that a full chest cavity enables him to speak with greater ease, though it does not improve the voice. In the midst of a sentence he often "yawns." The whisper voice is normal. At present his general health is excellent. An examination shows a little thickening of the nasal mucous membrane, with marked deviation of the septum to the right. Before coming to us his uvula had been amputated without benefit. The fauces appear normal; the larynx is normal except a moderate and diffuse congestion of the cords; there is also a mild congestion of the tracheal mucous membrane. The action of the cords is nearly normal. On phonation the alignment is at first perfect, but on continuing the effort there is a marked relaxation of the internal fibres of the thyreo-arytanoids, but in the higher tones the tension is perfectly held. The muscular action in abduction and adduction seems perfect. The faucial reflex is lost, the scapular is absent, the ankle clonus is absent, but the plantar reflexes and the patellar tendon reflex are exaggerated. All the others are normal. No abnormal signs are obtained over the chest. He has now rested from his professional duties for over six months, he has had electrical treatment for three months, and has had local and constitutional treatment of various kinds without benefit.

CASE II.—L. C., clergyman, aged sixty-nine years, first came under observation in July, 1886, complaining of a strained feeling in the larynx at times during the previous six months, more marked when tired and worried, and more perceptible during ordinary conversation. Ten years previously he had had a spasmodic affection of the larynx, from which he fully recovered. At the time he came under my observation his larynx showed a paresis of the right cord, the movements being slow both in abduction and adduction. A few applications of mild astringents were made, and he left in a few days for his summer vacation. In September he returned and resumed service in his pulpit, feeling little better, but preaching with comparative ease. He was placed on phosphate of zinc, a quarter of a grain; strychnine sulphate, a twenty-fourth of a grain; and arsenious acid, a twenty-fourth of a grain, with local applications of zinc sulphate, two grains to the ounce, and later copper sulphate, ten grains to the ounce. An examination of the larynx at this time showed free movement of the cords, but there was congestion of the edge of the right cord, and it slightly overrode the left in phonation. In November an examination showed sluggishness in the movement of the right cord. Occasionally he could preach as well as ever. He continued his services regularly from this time, and we had no opportunity of examining him again until September, 1890, when he again began to have his nervous trouble. He could preach once or twice weekly fairly well, but each afternoon and toward evening he experienced difficulty in ordinary conversation. He complained most of the effort in public speaking, the necessity of forcing the voice, and the tired condition of the muscles of the larynx, throat, and chest during and after speaking. He was taking at this time strychnine sulphate in one-twenty-fourth grain doses, which he continued for some weeks. In October he complained of some difficulty

in respiration, although there was no marked dyspnoea. The throat felt tired and uncomfortable at night. Except early in the day, when his voice was good, he was obliged to "jerk out" his words. He could read the service and preach in his usual good voice, but in conversation there was spasmodic action of the cords and an involuntary change to the falsetto tone. He continued his services quite regularly from this time until 1893, when he retired permanently from his work, in the meantime consulting many leading throat and nerve specialists in America and Europe, and being treated with electricity, hypodermics of strychnine, etc., with no benefit. We saw him again quite recently and found his condition much changed for the worse. His general health is robust, his intellect as keen and vigorous as formerly, his appetite excellent, and he sleeps well. On any attempt to speak or whisper there are violent spasms of the muscles of the larynx, the face, and some of the muscles of respiration, and the voice is uncertain, broken, and uncontrollable, changing rapidly from one pitch to another. He continues conversation only with great effort, but can say half a dozen words with perfect enunciation in a loud oratorical voice, such as he was wont to use in his pulpit. An examination of the larynx shows only slight congestion of the vocal cords, and the muscular action seems perfect. The phonation during laryngoscopic examination is excellent. There are no abnormal chest signs, or abnormal conditions of the nose or throat. An interesting fact in the case is that he has found that the use of cocaine in the nose will enable him to speak as well as he ever did in his life for one or two hours, and he has recently read a paper before a literary society of an hour's length, with perfect ease after its use. Experimentally, a minute quantity of a powder containing four per cent. of cocaine was insufflated in the nares. After a few seconds he remarked: "There, you see I can speak with perfect ease," and he could. It would be interesting to make applications of cocaine to other mucous surfaces—the larynx, the pharynx, and the tongue. We might thus determine whether we had or had not a reflex starting from the nasal membrane, but possibly the results here are due to the systemic influence of the drug. He volunteered the suggestion that if he could be placed under hypnotic influence he believed he could be helped, but efforts in this direction have been unsuccessful. Just now he is taking a systematic course of breathing exercises.

CASE III.—Sister C., aged twenty-five years, was first seen March 28, 1898. She has been a teacher in a convent nine years, and has also led the singing in the choir. She has been subject to colds during the last few years, and has frequently become hoarse, often losing the voice two and three days at a time, but up to September last the voice was usually clear and normal. At about that time she noticed that, while the voice was clear a part of the day, at about four o'clock in the afternoon she began to be troubled with dysphonia, and was obliged to speak in a whisper during the remainder of the day. Since January the dysphonia has been constant, and the voice has been affected during the entire day. In using the chest tones particularly, there is considerable muscular effort, and the voice will change from the chest tones to those of the upper register involuntarily and very abruptly; at other times the loud voice is lost entirely, quite suddenly, but she can speak easily in a whisper. She noticed a curious condition in singing. She says that "she seemed to have a double

voice, as if she had an accompaniment similar to that produced by striking the A and E strings of the violin together." After using the chest voice for a time, besides the pain in the larynx, there seems to be some swelling of the muscles externally, as she is obliged to loosen a silk handkerchief she is accustomed to wear about the neck. She says that the nose has been treated for hypertrophy by cauterization, and some treatment has been applied to the throat. There is no heredity in the family. She is of an exceedingly nervous disposition. About three weeks ago she had a slight attack of acute pleurisy, from which she has not fully recovered. She now has a slight hacking cough and a poor appetite; has lost about twenty pounds in weight, and complains of general weakness and a great deal of headache. There is a history of no other illness. An examination of the throat and nose showed that the nasal cavities were free and the tonsils moderately enlarged. There was some enlargement of the glands at the base of the tongue. Examination of the larynx showed the vocal cords clear and the upper portion of the larynx slightly congested. On phonation, at first the cords come together perfectly, but the ligamentous glottis fails to approximate perfectly, there being a space of about one millimetre. She has been seen but once, and was asked to avoid speaking in a loud voice, and was given arsenious acid, one thirty-sixth of a grain; strychnine sulphate, one twenty-fourth of a grain; quinine valerianate, two grains; camphor monobromide, three grains, four times a day.

In two other similar cases the records are not complete and the patients can not be found.

CASE IV.—P. L. J., male, aged fifty-one years, farmer. He was seen but once. For four or five years had trouble with his voice. It was feeble, high in pitch, strained and spasmodic, and seemed as if it required marked muscular action in the larynx to produce it. He could call cattle loudly by sucking in his breath. There were no abnormal appearances in the larynx.

CASE V.—T. S. F., male, aged thirty-three years, merchant. Had for two or three years previously a strained, catchy, and muffled voice, hoarse, jerky, and wavy in character, which was worse in damp weather, and talking was sometimes quite difficult. At times the voice was perfectly normal. The spasmodic action of the thyro-arytenoid and the abductors was evident on examination.

In two of these cases the improper use of the voice is plainly an element in the causation. In the first case there had been an effort for a number of years to accommodate the voice, which had little carrying power, to a large auditorium, and in order to reach the auditors in the rear the pitch was raised. In the second case the fault appeared to lie in the improper production of the voice, in cultivating the "accented ecclesiastics" to add to the effectiveness of the Episcopal service, but it seems to me evident that there was some other aetiological factor. In one case the affection did not appear until twenty-five years after the beginning of the patient's professional work, when it came on simultaneously with an attack of nervous dyspepsia and hay fever. The latter has persisted ever since. This patient has been under a constant nervous strain for several years, and the dysphonia has persisted in spite of treatment. There is a disturbance of reflex action. In the other, in which there seemed an element of hysteria, there has

been a long-continued and most vigorous use of electricity, tonics, absolute and prolonged rest, suggestion, etc., notwithstanding which the disease has steadily progressed.

In these cases we are forced to the conclusion that the disease is of neuropathic origin, probably located in the motor areas of the medulla. In the first patient a careful objective study has seemed to me to localize the spasm in the internal tensors of the vocal cords, as Elsberg (17) terms the thyreo-arytenoid muscles, the inner fibres of which, as stated by McCoy (18), "are chiefly concerned in fixing the free edge of the vocal bands in a state of rigidity." The picture shown by the laryngoscope in this case varied in the production of the chest voice and the falsetto. In the chest voice the vibratory action of the ligamentous glottis was evident, regardless of any action of the expiratory muscles, or a full amount of air in the chest, thus excluding one factor upon which Browne (19) lays stress. The alignment of the cords upon the attack in phonation is perfect, the arytenoids adducting perfectly. As the tone progresses the inner portions of the cords of the ligamentous glottis become lax and there is an elliptical opening with the production of the characteristic broken voice. In the falsetto voice, the action of the cords is perfect, and the tone is clear and unwavering. In the second case, however, there is, on every attempt at phonation, spasm in both lower and higher tones, and at the present time spasm of the muscles of the face and neck and some of the respiratory muscles.

The spasmodic action of the laryngeal muscles on attempt at phonation, with the production of the characteristic voice, but more or less perfect condition of the parts on laryngoscopic examination, are the essential points in making a diagnosis. The prognosis is unfavorable. Few cases are cured or much relieved. Two of the cases here reported have run the gamut of treatment by rest, lessons in proper breathing and use of voice, electricity, local applications, strychnine, arsenic, etc., in large and long-continued doses, and nerve sedatives, but are to-day in no better condition than when first seen. Dr. C. E. Mudge, an expert in treating stammering, after careful examination of the first case, concluded he could do nothing for him.

Prolonged rest for the voice and a general tonic course of treatment for the nervous system are indicated. Such nervine and general tonics as strychnine, arsenic, valerian, potassium bromide, quinine, iron, etc., are suggested. Electrical treatment has seemed to give relief in some cases. Astringent and sedative local applications have been used with some benefit, and the results in Oltuzewski's cases would indicate that any abnormal conditions in the nose and upper air tract should be relieved. It is an interesting fact that the use of cocaine in the nose in Case H seemed to relieve the spasm for a time, but the continued use of such an application could not be recommended. Ingals (20) recom-

mends prolonged rest for the voice, and then exercise in systematic reading in a low and unvarying monotone, discontinuing the exercise as soon as the voice breaks, and gradually prolonging the effort, if possible, and finally varying the pitch and intensity. We can not hope for a cure in any fixed line of treatment.

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ANOTHER CASE OF BRONCHITIS AND PNEUMONIA FOLLOWING THE INHALATION OF A FOREIGN BODY.

By C. E. COON, M. D.,

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On July 25, 1898, I was called to see Miss M. L., servant, unmarried, aged fifty-eight years; came to this country from Ireland when she was twelve years of age. She was of medium height, well nourished, and weighed about one hundred and sixty pounds. The family history was negative, and she had always been well; she could not remember having been previously under a doctor's care.

Two days before I saw her she had an attack of vertigo, accompanied by nausea and general malaise; later on the same day she had severe headache; there was no vomiting or chilly feeling. The following day an irritating cough developed and there was much soreness of the muscles, especially on the right side and back. At the time of my visit the cough and soreness of the muscles continued. The patient also complained of diarrhea; the tongue was coated and somewhat furred; the temperature was 102.4° F., the pulse 108. Percussion and auscultation over the lungs revealed nothing.

On the morning of July 26th I found the condition

much the same—temperature 102° F., pulse 104—and advised her to go to a hospital; in the evening of the same day she was admitted to St. Joseph's Hospital. The hospital records give the history as above; temperature on entrance, 102.8° F.; pulse, 114. The following day, temperature, 103.6° F.; pulse, 86; and an area dull on percussion was noted in the right lung posteriorly, but no râles could be heard. At this time the diagnosis of right central pneumonia was made by the hospital physicians, and treatment in accordance was instituted. For several days her temperature was high and pulse variable. On the evening of July 30th, during a paroxysm of coughing, she expelled a quantity of muco-pus, in which was found what upon examination proved to be a *huckleberry*. It was then learned that eleven days previous she had eaten huckleberries, but had no recollection of inhaling one, and had experienced no discomfort at the time. Immediately after the expulsion of the berry the temperature came down to normal and remained there. The cough continued with somewhat lessened severity, and she raised a little; but at no time, except when the berry was expelled, had there been anything like profuse expectoration. The patient convalesced quite rapidly, and on August 16th was discharged from the hospital. On September 17th I saw her again; the cough had not ceased entirely, and there was some purulent expectoration, which had a foul odor; examination of the sputum showed numerous pus organisms, but no tubercle bacilli or pneumococci were found.

She was advised to continue the tonic and hygienic treatment, and about October 1st she resumed her work, being in very good health.

Therapeutical Notes.

Creosote in Ozæna.—Ferrari, according to the *Riforma medica* for January 10th, recommends:

1. $\frac{1}{2}$ Creosote, $\frac{1}{2}$ of each equal parts.
Glycerin, $\frac{1}{2}$

And—

2. $\frac{1}{2}$ Creosote 75 grains;
Alcohol at 70 per cent. 150 "
Glycerin 600 "

For application on alternate days. If necessary, the cure is completed with the galvano-cautery.

The Treatment of Recurrent Epistaxis.—According to the *Riforma medica* for January 10th, Rendu recommends:

- $\frac{1}{2}$ Antipyrine $7\frac{1}{2}$ grains;
Tannin 15 "
Powdered sugar 150 "

To be used locally.

Subcutaneous Injections of Lecithin and Yolk of Egg in Infantile Anæmia and Marasmus.—Muggia (*Padiatria*, October, 1898; *Centralblatt für die gesammte Therapie*, January, 1899) recommends the use of a preparation made by adding to the yolk of a fresh hen's egg, in a sterilized capsule, one sixth of its weight of a seven-and-a-half per cent. solution of sodium chloride, stirring the mixture with a glass rod, and filtering

through absorbent gauze. From one to ten cubic centimetres are injected, generally in the lumbar region. The injections do not cause irritation or albuminuria. No result must be expected until twenty injections of at least five cubic centimetres each have been given.

A Mixture for Colic.—The *Riforma medica* for January 7th gives the following formula:

- $\frac{1}{2}$ Chloroform 8 parts;
Deodorized tincture of opium ... 6 "
Camphor 1 part;
Oil of cajuput 8 parts;
Water 200 "

M. S.: A teaspoonful every hour.

An Ointment for Granular Conjunctivitis.—Bloebaum (*Deutsche Medicinal-Zeitung*, January 23d) reports having observed decided benefit from the use of the following ointment in all stages of the disease:

- $\frac{1}{2}$ Copper sulphate, $\left\{ \begin{array}{l} \text{each} \dots\dots\dots 1 \text{ part;} \\ \text{Salicylic acid,} \\ \text{Cocaine,} \end{array} \right.$
Vaseline 100 parts.

M.

"Iodothyrein."—This substance, more properly called *thyroidin*, is the subject of a long article, by Lancereaux and Paulsco, the publication of which is begun in the *Journal de médecine interne* for January 1st. The authors deal more particularly with the effects of the remedy in such so-called "rheumatismal" affections as chronic rheumatism, gout, arteriosclerosis, vasomotor and trophic disturbances of the extremities, and scleroderma. They give the history of a case of generalized scleroderma in a young woman. She was much improved after four months' use of the remedy, which was to be continued.

The next case was that of a woman with "herpetism" and vasomotor disturbances of the limbs. The slightest exposure to cold caused blanching of the fingers and toes. Under the influence of thyroidin this trouble was much improved, and the profuse sweats and salivation with which the patient was also affected subsided entirely.

The third and fourth cases were those of men with "herpetism," chronic rheumatism and gout, generalized arteriosclerosis, hypertrophy of the heart, and renal sclerosis. Both were benefited in many respects by the treatment.

For Cocaine Poisoning.—The *Riforma medica* for January 21st attributes the following to Häetlin:

- $\frac{1}{2}$ Nitrite of amyl, $\frac{1}{2}$ of each, equal parts.
Spirits of wine, $\frac{1}{2}$

To be used by inhalation.

[We should advise great caution in the use of this remedy, only four or five drops being used at first, and the condition carefully watched.]

A Mixture for Coryza.—According to the *Riforma medica* for January 17th, Malbec recommends:

- $\frac{1}{2}$ Extract of hyoscyamus 24 grains;
Iodide of potassium, $\left\{ \begin{array}{l} \text{of each} \dots\dots\dots 30 \text{ " } \\ \text{Bicarbonate of potas-} \\ \text{sum,} \end{array} \right.$
Extract of hyoscyamus 75 "
Anise water 1,800 "

M.

A table-spoonful every four hours.

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THE SERUM TREATMENT OF HOG CHOLERA AND
SWINE PLAGUE.

WE have frequently had occasion to commend the work done in the biochemical laboratory and in other fields under the supervision of Dr. Sahnon, the chief of the Bureau of Animal Industry. The importance of this work can not be overestimated, either in connection with the impediments that are still continually set up against American meat in certain European markets or as related to the home consumption of western beef and pork. An idea of the immensity of the interests involved in "animal industry," so far as food products are concerned, may be got by perusing a pamphlet lately issued by the bureau on *The Serum Treatment of Swine Plague and Hog Cholera*, prepared by Dr. E. A. de Schweinitz, with the collaboration of Dr. Marion Dorset and Dr. E. C. Schroeder. It is estimated, according to these gentlemen, that the State of Iowa alone loses \$15,000,000 annually in the loss of swine from disease—practically, we take it, from hog cholera and swine plague—\$11,000,000 of which might be saved at an expense to the farmer of not more than fifteen cents for each animal treated with the curative serum.

It can hardly be questioned, in the light of the bureau's investigations, that hog cholera and swine plague are essentially distinct diseases, although they present features of similarity which often render a diagnosis exceedingly doubtful in cases in which recourse is not had to bacteriological tests, and that resort obviously is in many instances out of the question, at least for the time being. Blood examinations resembling in a general way the employment of Widal's test for typhoid fever in the human subject, as has been suggested, might perhaps, says Dr. de Schweinitz, be useful in determining the character of diseases among swine in the field in a quicker way than would be possible if it was necessary always to work out the nature of the culture. While, however, Dr. Dawson, of the Division of Animal Pathology, has found that the majority of such blood examinations agree with the culture tests, in a few instances the reaction proper to hog cholera has been observed in blood taken from animals

that had undoubtedly died of swine plague, although they might have had in addition a slight infection with hog cholera. The two diseases, it thus appears, may coexist in the same animal.

In view of these difficulties of ready diagnosis, the bureau has felt the importance of endeavoring to produce a serum that would be efficacious against both diseases, and experiments have been carried on with that end in view. It had been shown, says Dr. de Schweinitz, that the serum prepared for the purpose of curing hog cholera was useful in protecting small animals from hog cholera only or in curing them of that disease only, and that the swine-plague antitoxine was efficient against swine plague only. Nevertheless, it had been shown that, if animals infected with hog cholera were treated with a mixture of the two antitoxines, they generally responded to the treatment a trifle more promptly than those treated with the hog-cholera antitoxine alone. Efforts were made, therefore, to establish in one and the same animal a serum that would prove effective against both diseases. In order to accomplish this, injections of hog-cholera cultures and swine-plague cultures or their products, alternately or together, were administered to the animals that were to serve as the source of the desired product, the doses being increased gradually until enough had been used to impart the necessary properties to the serum. In this way a serum was obtained which was slightly efficient against both diseases, but it was more active in checking swine plague than in checking hog cholera. Moreover, the animals treated did not thrive. There were good reasons, then, for turning to the simpler plan of furnishing a mixture of hog-cholera antitoxine and swine-plague antitoxine, and that is what the bureau is now doing. Nevertheless, the following statements are interesting: "The work, however, indicated the possibility of perhaps producing in the same animal a serum which may be specific for two distinct diseases. Experiments are being made now to ascertain to what extent this principle can be utilized in connection with other diseases of men and animals, especially tuberculosis."

Confidence in the efficiency of the mixed serum does not rest solely on laboratory experiments. A good deal of field work has been done in Page County, Iowa, under the direction of Dr. Dorset and Dr. McBirney, during the years 1897 and 1898, and check herds have been used, so that there can be no caviling as to the result—a great reduction of the mortality—having really been due to the use of the serum. That being the case, Dr. de Schweinitz is amply warranted in suggesting co-operation by certain States in this part of the work done by his bureau.

THE DISQUIETING FREQUENCY OF CRIMINAL ABORTION.

If we may judge from the tenor of our exchanges received from all parts for many months past, the widespread frequency of criminal abortion must give rise to considerable disquietude. When pregnancy is the result of illicit relations it is not, perhaps, so much a matter of surprise as of concern that criminal measures should be resorted to for its premature termination; but when, as is undoubtedly often the case, it occurs among respectable married women, who are often, moreover, in other respects of high moral character, great natural refinement, and culture, it suggests the need of a search for the causes underlying this blunted sense of right and wrong. The *exposé* recently made in England shows that outside of those who use or submit to operative interference for the procuring of abortion, there is a large and lucrative trade effected by nostrum dealers in abortifacients, often, no doubt, useless for the purpose for which they are sold, but none the less indicative of the attitude of mind on the subject of abortion among the vast *clientèle* of women who cause the business to pay.

The first and primal error, leading to conditions which ultimately suggest the crime of abortion, we think, lies in a total misconception of the real nature of the sexual act and its relation to "love." Two views only are commonly admitted. In the public mind it is with the vast majority a means of purely sense gratification, which is legitimized by "marriage." Marriage may be described as a social, religious, or social-religious compact, whose conditions and method of ratification vary in different races, religions, nationalities, and geographical areas, but the one point of which, common to them all, is that it conveys a license to a man and a woman to indulge in sexual relations without any public hindrance or social stigma attaching thereto; while such hindrance is effected and such stigma does attach to the same act between the same people, if publicly known, unless they have previously entered into that public contract under whatever conditions the local sentiment prescribes.

The other view is that of the social economists, who regard the performance of the sexual act as mainly and primarily for the procreation of the race. An article in the *Medical Press and Circular*, quoted by the *Cincinnati Lancet Clinic* for January 28th, on "The Marriage of Ovariectomized Patients, and referring to a recent law trial in this country in which a husband sued for divorce on the ground that his wife had prior to her marriage been the subject of oophorectomy, of which

fact he was not duly informed, gives frank expression to this view of the sexual relations in the following words: "We know of no authorized view of marriage other than that it is an institution for the procreation of children, and for the vast majority of persons this is, we presume, the ultimate object of the self-imposed sacrifice of sexual liberty."

Now, while we quite indorse the opinion expressed in the article quoted, that the fraud perpetrated by concealing the fact of a known incapacity for motherhood, undoubtedly one of the great reasons for the marriage relation, is a just and reasonable ground for the annulment of the marriage bond, we feel bound to protest against a view of the sexual relations which would reduce the glorified companionship of matrimony to the principles of a stud farm. We hear a great deal in these days about the "revolt of woman." With her awakening intellectual power, she is scarcely likely to remain content with a view of the greatest relationship of life which affords her the alternative of a choice between the position of a licensed handmaid of lust and the functions of a brood mare.

Neither of the views above quoted is in our opinion consistent with the ideal of love. Dr. George F. Butler, in a very thoughtful article, read before the Physician's Club of Chicago and published in the *Chicago Clinic* for January, on *Sexual Desire as Influenced by Religious Emotions*, emphasizes by admirably selected quotations the essential relation and analogy between sexual desire and religious feeling. He refers in illustration to the almost sensual expression of religious manifestations of an undoubtedly spiritual character among certain religious enthusiasts. This mode of expression seems easily explicable to us. The true idea of love is an earnest yearning for the most complete and intimate union, harmony of vibration, and mutual absorption attainable between two beings each of whom is both the lover and the beloved. In pure spirit the mode of union would be purely spiritual; in a solely material existence it would be purely sensual; in man it partakes of both in direct proportion to the balance between the physical and spiritual natures of the individual.

Are women as (physically) passionate as men? is a question often asked. We have studied this question extensively, and we must answer "yes" and "no." Women are ready, normal women we mean, to yield themselves wholly to the man they love, and to exalting as they do the inner grandeur of the act. But when they at last sadly and sorrowfully recognize the essentially sensual character of man's nature, and, even when he is genuinely attached to his partner therein, that which

should be to them the cup of sweetness often becomes bitter as wormwood.

In the act of sexual congress the properly balanced human being seeks such complete and perfect contact and union of his threefold nature with his mate as, we say it with all due reverence and without offense, the devout Christian of whatever denomination seeks intimate union for his spiritual nature with the Great Fount of all Pure Spirit through sacramental communion. The act of sexual union, therefore, which is undertaken solely for the production of a certain physical sensation is as impure and lustful, whether the parties have acquired a legal right to perform it or not, as an act of communion would be unholy in the Christian if done from a desire to appease hunger with the material bread, or to gratify the palate with the sensuous flavor of the wine, no matter though the act were done with all due observance of the rites and ceremonies prescribed by the religious body to which the individual happened to belong.

Now, in many people, such an exaltation of emotional desire as we consider should be the real motive of the act of sexual congress is often lacking; whence it follows that, speaking of a large number of people—and we refer only to the married in this connection—they must frequently transgress in an unworthy act of sexual communion. The upshot of this is likely to be a blunting of the moral sensibilities as regards the eventualities of such congress, and moreover the transmission of an excessive sensuality to the progeny.

From the social side the difficulties which are placed in the way of the mating of young people in whom the real higher emotion exists lead not infrequently to an "illicit" intercourse. To the artificial conditions which society imposes upon a young couple, such as the necessity for "keeping up an establishment," magnificent or humble in proportion to the previous social status of the subjects (whereas the girl would probably otherwise remain supported according to her station by her parents, while the man would have an income which sufficed only moderately well enough for him without social obligations to perform), must be added the small wage attendant on labor of whatever kind as compared with the large profits that accrue to the exploiter of his labor by means of his accumulated capital.

To these difficulties and obstacles the tendency of the present day is to add certain others, such as we referred to in an editorial on *The Sterilization of Women* in our issue for January 28th, on social economic ground for the benefit of the race, and utterly regardless of the rightful emotions and impulses of the individual. Hence follow illicit union (which is by no means neces-

sarily lustful in itself, though it probably arises from lust rather than love in the large majority of cases) and possibly an unexpected and unwelcome pregnancy entailing social outlawry unless obviated. The result is abortion, regarded by the distracted sufferers as the lesser of two evils.

When the congress is the result of lust, whether among the married or unmarried, pregnancy is likely in either case to prove unwelcome; and the blunted sensibilities to a higher ideal which are occasioned by the continual crime against Nature of dwelling on the "outward and visible sign" to the exclusion of the "inward and spiritual grace" or thing signified, viz., complete contact, union, and mutual absorption of two human beings in their perfect nature in all its component parts, mental, emotional, and physical, are not conducive to an adequate appreciation of the criminality of abortion.

The idea of lust as applied to normal sexual relations between married people may possibly strike many as strange. But we believe that in the want of general recognition of this fact lies the secret of the evil. A more thorough understanding and appreciative practice of actual purity, which is a matter of motive, not of act, among the married, together with the proper and progressive enlightenment of their children on lines similar to those suggested in our articles on *The Ethics of Adolescence*, would, we think, change the entire public estimate of marriage; and, by removing social and other impediments to the lawful expression of the imperious emotion of love, would at least relegate criminal abortion to the class of the essentially depraved.

MINOR PARAGRAPHS.

THE RESPONSIBILITY OF THE MEDICAL PRACTITIONER.

IN our issue for July 2, 1898, we published an editorial on *Actions for Malpractice*. A very important decision bearing on the subject of such actions was, we learn from the *Lancet* for January 28th, recently given in the Queen's Bench Division of the English High Court of Justice by Mr. Justice Mathew. A carpenter had sustained a fracture of the right leg, which was treated by a local doctor, with the result of five eighths of an inch shortening.

The cause of complaint was that the doctor had treated the patient as though only one bone of the leg was broken, whereas a subsequent X-ray photograph proved that both had been fractured. One medical man pronounced the treatment inadequate under the circumstances, while several others maintained that it was quite suitable, and the *Lancet* itself, while necessarily admitting the doctor's error in diagnosis, says: "The treatment for a fractured tibia is practically the same as that for both bones of the leg, therefore the defendant was not injured by the wrong diagnosis." Mr. Justice Mathew held in this case that medical men were not

responsible for errors of judgment if they honestly tried to do their best; and this the *Lancet* describes as "a very sensible finding." We think so, too, always provided that the error is not such as to show gross incompetence or ignorance of things which a practitioner of average intelligence ought to know. It is satisfactory to learn that the jury found for the defendant.

A BIT OF HASTY CRITICISM.

We have received from a Chicago physician a postal card bearing the following message: "Your leading editorial in last Saturday's *Journal* (February 11th) noticed; hence I smiled when a little further on, page 212, sixteenth line from bottom of first column, I read: 'ideas they have got about on the serious effects.' If our correspondent will 'look again,' he will find that the passage really reads 'ideas that have got about,' etc. Moreover, the whole thing is in quotation marks.

COMMERCIAL TRAVELING AS A CAUSE OF NEURASTHENIA.

GRANHOLM (*Finska Lakaresällskapet Handlingsgar*, October, 1898; *Archives de neurologie*, January, 1899) thinks that the exciting life of a commercial traveler is very likely to lead to neurasthenia, not only from the irregularities incident to such a life, but also from the fact that the traveler has constantly to deal with great numbers of strangers. He recommends isolation in the treatment.

A HAIRPIN IN A HERNIA.

In the *Montpellier médical* for January 23d de Bonville records a case in which, in performing Championnière's radical operation for inguinal hernia, he found a hairpin in the sac. The patient said that he had thrust it "into his belly" to keep the hernia reduced.

MR. HAVELock ELLIS'S BOOK ON SEXUAL INVERSION.

The *Southern Medical Record* for January quotes a generally excellent article on this subject from the *Medico-legal Journal*. The article, however, closes as follows: "There can be no doubt that Mr. Ellis made a serious mistake in selecting his publisher. Mr. Bedborough may have been a dealer in obscene books, and *persona non grata* with the court or the authorities. It is stated that he has published a magazine devoted to the propaganda of unconventional views upon marriage, and the book of Mr. Ellis may have been, in the judgment of the authorities and the recorder, tarred with the same stick with Mr. Bedborough's other publications—we do not know. Even were this so (which was, as we think, a grave error on the part of Mr. Ellis), it would not change the character of the unjust accusation made against the work by the recorder, but would bear in mitigation and explanation of the judicial utterances; but the lesson to Mr. Ellis, and to writers generally, would remain, that authors, as well as men, are known and judged by the company they keep, and Mr. Ellis, like poor Tray, have been judged by reason of his unfortunate environment." We know nothing of Mr. Bedborough or his views, but we would remark that of the publication of "unconventional" views on marriage or any other subject, when they are honestly held, we should

deemed reprehensible, then the sooner we give up all idea of progress, abandon all research, and relinquish all philosophic scholarship and investigation into social, moral, or economic problems, and settle down to stagnation, the better. We may ask if Washington and his colleagues had indorsed that opinion would there now have been any United States of America?

THE TOXIC EFFECTS OF BORIC ACID.

EVANS (*British Medical Journal*, January 28th) reports a case in which, after about three weeks' use of boric acid in increasing doses of from ten to twenty grains three times a day, for cystitis, an erythematous rash appeared on the neck, face, and head, and was followed by some subcutaneous oedema and a fine scaly dermatitis. The salivary glands began to enlarge and subsequently the man became perfectly bald. It was six weeks before there was any new growth of hair. The author has observed the milder of these effects in a number of other cases, but has always been able to prevent baldness by stopping the administration of the drug.

DR. BARKER ON THE NEURONES.

For a number of months past we have published from time to time exceedingly valuable articles on The Anatomy and Physiology of the Nervous System and its Constituent Neurones, by Dr. Lawellus F. Barker, of the Johns Hopkins University. These articles, together with a considerable amount of added matter, our readers will be glad to learn, are soon to be published in book form.

THE PAY OF CORONERS' PHYSICIANS.

The bill that has recently been introduced into the Assembly of the State of New York having for its object the raising of the annual salaries of the coroners' physician ought to be facilitated in its progress toward enactment by the fact of its having been introduced by Dr. Henry, one of our assemblymen. We have before advocated an increase of pay for the hard-worked officials in question, and we hope Dr. Henry's bill will become a law.

A WOMAN WITH A PENIS.

In the *Centralblatt für Gynäkologie* for February 1th Neugebauer reports the case of a Jewish woman, twenty-seven years old, who applied for employment at a wet-nurse agency seven days after having given birth to a child. In the examination it was found that she had what appeared to be a penis springing from the perineum. It was not quite two inches long when flaccid, but on manipulation it became erect and measured rather more than two inches. It was provided with a well-defined glans, which was partly covered by a prepuce.

ITEMS.

An Interesting Point in the History of the Orthopedic Corset. On January 27th Dr. A. M. Phelps, of New York, read before the Royal Society of Medicine and Surgery a paper on "The Corset of the Future." The paper dealt with the history of the corset from the time of the Spaniards and the French. It was a very interesting and valuable paper, and it was well received by the audience. The paper was published in the *British Medical Journal*, February 28th, 1899. It was a very interesting and valuable paper, and it was well received by the audience. It was published in the *British Medical Journal*, February 28th, 1899. It was a very interesting and valuable paper, and it was well received by the audience.

cussion. Among the speakers was Dr. Stuart McGuire, who said that the subject of Pott's disease was one of peculiar interest to him, as he had been the victim of the disease during childhood; that he had been a patient of Dr. Lewis A. Sayre's; that he had been the subject of many experiments, and that he believed he was the original person upon whom the plaster-of-Paris jacket was applied; that, although twenty-five years had elapsed, he could remember how Dr. Sayre placed him face downward across his knees and by separating his legs and producing extension relieved pain and reduced deformity. This was the inception of a principle now carried out by suspension. He remembered how Dr. Sayre placed his broad hands on either side of the spinal column and, by gentle pressure, maintained the correction secured and gave support and immobilization to the back. This was the inception of the principle now carried out by the plaster cast. Dr. McGuire said that the first attempt at the practical application of the brace consisted in laying him upon a table and producing extension by manual traction on his head and feet and then the application of alternate layers of squares of flannel and wet plaster to his back. This formed a "turtle shell," which was held in place by circular turns of a cotton bandage.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the three weeks ending February 18, 1899:

DISEASES.	Week ending Feb. 4.		Week ending Feb. 11.		Week ending Feb. 18.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	12	5	11	5	15	1
Scarlet fever.....	229	18	181	13	155	16
Cerebro-spinal meningitis.....	0	4	0	0	0	3
Measles.....	153	12	170	12	210	9
Diphtheria.....	182	40	186	34	161	11
Croup.....	11	9	16	5	15	6
Tuberculosis.....	198	189	252	160	255	187
Small-pox.....	1	0	1	0	0	0
Chicken-pox.....	35	0	35	0	13	0

The Tri-State Medical Association of Mississippi, Arkansas, and Tennessee and the "Osteopaths."—At the annual meeting, held in Memphis on December 20th, 21st and 22d, the sense of the meeting was expressed as follows:

Whereas, The medical laws of the various States have been so perverted by political influences as to give legislative sanction to grotesque, ignorant, and dangerous sects of pretenders and charlatans; and

Whereas, The privileges granted to one of the most outrageous aberrations—namely, the so-called osteopaths, constitute a disgrace to the States in which the "osteopaths" are legally entrenched; and

Whereas, a certain William Smith, osteopathist, having been roundly denounced, together with his sect, by Parke, Davis, & Co., and the *Medical Age*, now brings suit against both for twenty five thousand dollars damages; therefore

Be it Declared the sentiment of the Tri-State Medical Association of Mississippi, Arkansas, and Tennessee that Parke, Davis, & Co. and the *Medical Age* are entitled to the sympathy of its members and of all medical practitioners; that we wish and expect them to enjoy a complete triumph in repelling the legal assault; and that where ever a powerful house takes a bold stand in opposition to quackery it promotes the interests of legiti-

mate and honorable medicine and the welfare of humanity.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general of the United States Marine-Hospital Service during the week ending February 18, 1899:

Small-pox—United States.

Denver, Col.....	Nov. 2-Feb. 8.....	23 cases.
Washington, D. C.....	Feb. 7.....	6 "
Dana, Ind.....	Feb. 8.....	1 case.
Evansville, Ind.....	Feb. 8.....	1 "
Indianapolis, Ind.....	Feb. 8.....	1 "
New Orleans, La.....	Jan. 28-Feb. 4.....	2 cases.
Auburn, Androscoggin County, Me.....	Feb. 11.....	1 case.
Waterville and Winslow, Kennebec County, Me.....		8 cases or more.
Baltimore, Md.....	Feb. 10.....	1 case.
Omaha, Neb.....	Jan. 28-Feb. 11.....	5 cases.
Dunkirk, N. Y.....	Jan. 28-Feb. 4.....	1 case.
New York, N. Y.....	Feb. 4-11.....	1 "
Cleveland, Ohio.....	Jan. 28-Feb. 4.....	4 cases.
Laredo, Texas.....	Jan. 21-28.....	43 " 9 deaths.
Laredo, Texas.....	Jan. 28-Feb. 4.....	69 " 14 "
Alexandria, Va.....	Feb. 7.....	19 " (3 suspects).
Alexandria, Va.....	Feb. 8.....	11 cases (3 suspects).
Alexandria, Va.....	Feb. 9.....	6 cases (2 suspects).
Norfolk, Va.....	Feb. 8.....	9 cases.
Norfolk, Va.....	Feb. 9.....	6 " (2 suspects).
		Total on land, 132 cases.
Appleton, Wis.....	Feb. 7.....	2 "

Small-pox—Foreign.

Lorenzo Marques, Africa.....	Nov. 1-30.....	19 deaths.
Lorenzo Marques, Africa.....	Dec. 1-31.....	6 "
Bahia, Brazil.....	Jan. 7-14.....	15 cases, 1 death.
Bahia, Brazil.....	Jan. 14-21.....	10 " "
Province of Quebec, Canada.....	Jan. 26-Feb. 6.....	11 " 1 "
Hongkong, China.....	Dec. 31-Jan. 7.....	3 " "
Liverpool, England.....	Jan. 15-22.....	1 case.
London, England.....	Jan. 15-22.....	1 " "
Bombay, India.....	Jan. 11-18.....	1 " "
Colombo, Ceylon.....	Dec. 24-31.....	1 " "
Madras, India.....	Dec. 31-Jan. 6.....	1 " "
Awamori Ken, Japan.....	Dec. 9-31.....	73 cases, 15 deaths.
Chiba Ken, Japan.....	Dec. 9-31.....	1 case.
Iwate Ken, Japan.....	Dec. 9-31.....	1 " "
Nagano Ken, Japan.....	Dec. 9-31.....	1 " "
City of Mexico, Mexico.....	Jan. 31-Feb. 4.....	5 cases, 4 "
Nuevo Laredo, Mexico.....	Jan. 19-Feb. 2.....	9 " 1 death.
Moscow, Russia.....	Jan. 14-21.....	6 " 2 deaths.
Odesa, Russia.....	Jan. 14-21.....	6 " 7 "
Odesa, Russia.....	Jan. 21-28.....	5 " 2 "
St. Petersburg, Russia.....	Jan. 7-11.....	2 " "
St. Petersburg, Russia.....	Jan. 14-21.....	2 " "
Warsaw, Russia.....	Jan. 24-31.....	4 " "
Constantinople, Turkey.....	Jan. 9-23.....	28 " "

Yellow Fever.

Bahia, Brazil.....	Jan. 7-14.....	2 cases, 1 death.
Rio de Janeiro, Brazil.....	Dec. 23-30.....	11 " 8 deaths.
Vera Cruz, Mexico.....	Jan. 19-Feb. 2.....	4 " "
Vera Cruz, Mexico.....	Feb. 1-9.....	2 " "

Cholera.

Bombay, India.....	Jan. 11-18.....	6 deaths.
Calcutta, India.....	Dec. 24-31.....	56 "
Madras, India.....	Jan. 7-15.....	1 death.

Plague.

Bombay, India.....	Jan. 11-18.....	308 deaths.
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A Foreign Body in an Appendicular Abscess.—Dr. P. H. Fithian, of Springfield, Illinois, surgeon in charge

of the Wabash Employees' Hospital, writes to us as follows: In the *New York Medical Journal* for January 28th I notice Dr. Phelps's report of a case of appendicitis in which the appendix was found to contain a minute piece of bone.

This article calls to mind a case that I had in July last, which I think may be of interest. Briefly, it is as follows: C. H. M., a freight brakeman, aged twenty-eight, with no history of a previous attack, began to feel badly on Saturday, June 25, 1898, at noon. About noon the following Monday he was seized with violent pain in the region of the appendix, and immediately took to his bed in the caboose, and summoned a physician, who did not reach him until 5.30 that evening. He diagnosed the case as appendicitis, advised the man to go to hospital at once, and gave him half a grain of morphine by the mouth; but this did not influence the pain, and that night the patient got no sleep. The next day he was admitted into the hospital at noon, having come a distance of forty miles. For the next few days pain was controlled by morphine administered hypodermically, the bowels were moved every day or two with magnesium, and hot applications were kept over the seat of pain. On July 6th I was of the opinion that there was an abscess which should be incised, and called Dr. J. A. Prince in consultation, who advised an operation. The next day the abscess was incised, evacuated, irrigated, and packed lightly. It was flushed out every day thereafter, and during one of these flushings, on July 11th, Dr. Prince and my house-surgeon, Dr. Fisher, being present at the time, I noticed within the cavity of the abscess a foreign body of some kind, which I removed with a forceps and found to be a piece of solder, quite thin, triangular in shape, and weighing eight grains.

The man afterward stated that he had for some time been very fond of canned raspberries, frequently calling for them at the eating houses along the road, and I doubt not that here is the clue to the little piece of solder which lit up his attack of appendicitis. I will add that he made an uneventful recovery, resuming his duties as brakeman the following September, and continuing thereat until this week, when he returned to hospital for treatment for tinea tonsurans, thus giving me the opportunity of completing the history of the case just when I most wished for it.

A Congress for the Suppression of Tuberculosis is to sit in Berlin from the 24th to the 27th of May, under the presidency of the Herzog von Ratibor and Dr. von Leyden. Particulars may be learned by addressing the secretary-general of the organization committee, Dr. Pannwitz, No. 2 Wilhelm Platz, Berlin, W.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Pathology, on Tuesday evening, the 21st inst., Dr. H. R. Hopkins opened a discussion on the following papers: Intraocular Tumors, by Dr. B. H. Grove; and The Pathology of Alcoholism, by Dr. J. W. Grosvenor.

The Atlantic County (New Jersey) Medical Society.—Officers were recently elected as follows: President, Dr. A. D. Cuskaden; vice-president, Dr. W. Reynolds; secretary and treasurer, Dr. W. Edgar Darnall; reporter, Dr. E. Marvel.

The Atlantic City Academy of Medicine. Officers were recently elected as follows: President, Dr. W. B. Stewart; vice-president, Dr. W. Edgar Darnall; secret-

tary and treasurer, Dr. W. Reynolds; corresponding secretary, Dr. J. B. Thompson.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 18th inst., the following papers were presented for discussion: The Surgical Treatment of Trifacial Neuralgia, with a Report of a Case of Removal of the Gasserian Ganglion, by Dr. N. B. Carson; The Pathology of Trifacial Neuralgia, with a Microscopic Demonstration on the Screen of the Normal and Diseased Gasserian Ganglion, by Dr. Ludwig Bremer; and A Report of a Case of Removal of the Gasserian Ganglion, by Dr. H. H. Mudd.

The Late Dr. McGillicuddy.—At a special meeting of the corps of professors of the New York School of Clinical Medicine, held on January 20, 1899, the following resolutions were unanimously adopted:

Whereas, It becomes our sad duty to chronicle the death of our late esteemed colleague, Dr. T. J. McGillicuddy, which untoward event occurred on the 17th day of January, 1899; therefore be it

Resolved, That, while recognizing in this sudden and unexpected dispensation the hand of an all-wise Providence, we nevertheless appreciate the importance to the institution of the loss of one of its devoted friends.

Resolved, That we, his associates, express deep regret at the loss of our esteemed colleague, whose interest in all that pertained to the advancement of medical science won our esteem and admiration.

Resolved, That the death of Dr. McGillicuddy deprives this community of one of its most useful citizens and the medical profession of a representative who always labored earnestly to uphold its best interests.

Resolved, That a copy of these resolutions be sent to his family and to the medical press of this city.

J. J. E. MAHER, M. D.,

Chairman,

J. J. MORRISSEY, M. D.,

Secretary,

Committee.

The Death of Professor Coats.—By the death of Dr. Joseph Coats, Glasgow University in particular and the British Medical profession in general lose one of their brightest ornaments. As a pathologist, and especially as a teacher of pathology, he held high rank, and it was largely due to his efforts that the Pathological Institute, which was opened in 1896, was established on a firm and solid basis. He died in his fifty-third year from sudden collapse in the interval between the first and second stages of lumbar colotomy performed for relief from the effects of a malignant tumor in the region of the descending colon. His loss will be widely felt in the domain not only of his special science but of medical literature also; for besides his various works it was under his able editorship that the *Glasgow Medical Journal* thrived.

The Death of Dr. Ernst Julius Gurlt, the well known writer on fractures, is recorded by the *Wiener klinische Wochenschrift* as having taken place on January 20th. He was in his seventy-fourth year.

The Chicago Society of Internal Medicine.—At the last regular meeting, on Thursday evening, the 24th inst., the following papers were presented for discussion: Cardiac Rheumatism, by Dr. Joseph M. Patton; The Relations of Rheumatism and Chorea, by Dr. Robert B. Preble; and Where shall we seek for the Etiology of Patients? The Health Resorts of the West and Southwest,

by Dr. Frank E. Waxham. It is announced that the discussion on acute articular rheumatism will be concluded at the March meeting.

Complete Transposition of the Viscera.—In the *Archives des sciences médicales* for September and November, 1898, Dr. E. Nimovici and Dr. E. Juvara give a complete and detailed account with excellent illustrations of a case of transposition of all the viscera of the thorax and abdomen in a Roumanian aged thirty-two.

Change of Address.—Dr. Charles E. Denison, to No. 215 West Thirty-fourth Street.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending February 18, 1899:*

BERRYHILL, T. A., Passed Assistant Surgeon. Detached from the *New York* and ordered to the *Panther*.

BLACKWELL, E. M., Assistant Surgeon. Detached from the *Franklin* and ordered to the *Abarenda*.

BYRNES, J. C., Surgeon. Detached from the *Puritan* and ordered to continue duty at the Norfolk Navy Yard.

DRAKE, N. H., Surgeon. Detached from the *Minneapolis* and ordered home to await orders.

HEKNDON, C. G., Surgeon. Ordered to temporary duty on the *Richmond*.

KINDLEBERGER, C. P., Passed Assistant Surgeon. Promoted with relative rank of lieutenant, junior grade.

McCULLOUGH, F. E., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered to the *Nero*.

PAYNE, J. H., Assistant Surgeon. Detached from the *Marcellus* and ordered to temporary duty on the *Franklin*.

RIGGS, C. E., Passed Assistant Surgeon. Detached from the *Topeka* and ordered to the *New York*.

SHUGRUE, D. A., Assistant Surgeon. The order of February 4th, detaching him from the *Abarenda* and ordering him home, is modified, and he is ordered to temporary duty on the *Topeka*, and, when that vessel arrives at Boston, he is detached and ordered home.

SHUGRUE, D. F., Assistant Surgeon. Honorably discharged from the service of the United States.

STEFF, J., Assistant Surgeon. Detached from the *Independence* and ordered to the Naval Hospital, Mare Island, California, for temporary duty.

WESTWORTH, A. R., Surgeon. Promoted, with relative rank of lieutenant.

YORNG, L. L., Passed Assistant Surgeon. His leave of absence on account of sickness is extended three months.

The following order was issued from the headquarters of the army, February 4th: ROSS, JOHN W., Surgeon, United States Navy, retired, having been assigned to duty under the War Department, will proceed from Clarksville, Tennessee, to Havana, Cuba, and report in person to the commanding general, Division of Cuba, for assignment to duty.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 4 to February 11, 1899:*

BRENING, CHARLES, First Lieutenant and Assistant Surgeon, is honorably discharged from the service of the United States.

BUSHNELL, GEORGE E., Major and Surgeon, is detailed as a member of the board of survey appointed to meet at the War Department to investigate the loss of certain hospital and commissary funds during the storm and tidal wave at Fernandina, Florida, October 2, 1898.

EVERTS, EDWARD, Captain and Assistant Surgeon, is relieved from further duty at Fort Apache, Arizona, and will proceed to San Francisco for duty.

GANDY, CHARLES M., Major and Chief Surgeon, is relieved from further duty at the Josiah Simpson Hospital, Fort Monroe, Virginia, and will proceed to Fort Slocum, New York, for duty.

GIBSON, ROBERT J., Major and Surgeon, is relieved from duty at Anniston, Alabama, and will return to his proper station, Fort Meade, South Dakota.

GREENLEAF, HENRY S., First Lieutenant and Assistant Surgeon, will proceed to Washington Barracks, D. C., for duty.

HARRIS, HENRY S. T., Major and Brigade Surgeon, is detailed as a member of the examining board appointed to meet at Huntsville, Alabama, *vice* McCULLOUGH, CHAMPE C., Captain and Assistant Surgeon, who is hereby relieved.

LYON, GEORGE E., Major and Surgeon, is honorably discharged from the service of the United States.

MEARNS, EDGAR A., Major and Chief Surgeon, is relieved from his present duties, and will proceed to Fort Adams, Rhode Island, for duty.

MUNSON, EDWARD L., Captain and Assistant Surgeon, is detailed as a member of the army retiring board appointed to meet in Washington at the War Department, for the examination of such officers as may be ordered before it.

SWIFT, EUGENE L., Major and Brigade Surgeon, is honorably discharged from the service of the United States.

WETHERILL, HENRY E., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board appointed to meet at Huntsville, Alabama, *vice* STONE, JOHN H., First Lieutenant and Assistant Surgeon, who is hereby relieved.

Society Meetings for the Coming Week:

MONDAY, February 27th: Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, February 28th: New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, March 1st: New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, March 2d: New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of

Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, March 3d: Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, March 4th: Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Births, Marriages, and Deaths.

Married.

BENNETT—MATTISON.—In Brooklyn, on Friday, February 10th, Ensign Ernest L. Bennett, United States navy, and Miss Mabel Chester Mattison, daughter of Dr. J. B. Mattison.

HOLMES—BOISE.—In Berlin, Germany, on Tuesday, February 14th, Dr. Edwin Holmes, of New York, and Miss Frieda Boise.

KOONZ—TOFFEY.—In Jersey City, on Tuesday, February 14th, Dr. Albert E. Koonz, of New York, and Miss Jennie Rodger Toffey.

SHEA—WEEKS.—In New York, on Tuesday, February 14th, Dr. Dennis L. Shea and Miss Anna J. Weeks.

Died.

HOVEY.—In Rochester, N. Y., on Sunday, February 12th, Mrs. Marilla D. Hovey, wife of Dr. Bleecker L. Hovey.

HUNTINGTON.—In Boston, on Monday, February 13th, Dr. Alfred T. Huntington, aged thirty-one years.

MEEKER.—In Leconte, Louisiana, on Sunday, February 12th, Dr. Samuel F. Meeker, in the sixty-fourth year of his age.

ROSE.—In Roxbury, Massachusetts, on Thursday, February 9th, William A. Rose, son of Dr. George S. Rose, United States army.

SIZER.—In Brooklyn, on Thursday, February 16th, Mrs. Georgiana Mitchell Sizer, wife of Dr. Nelson B. Sizer, in the forty-ninth year of her age.

STEWART.—In Shippensburg, Pennsylvania, on Friday, February 10th, Dr. Robert C. Stewart.

TUFTS.—In Dover, New Hampshire, on Sunday, February 12th, Dr. Charles A. Tufts, aged seventy-seven years.

Special Articles

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

VII

CONTRACT OF PHYSICIAN WITH PATIENT

(Continued from page 26.)

Contracts to Follow Established Modes of Practice.

—The physician and surgeon also implicitly contract

with his patients that in his treatment of them he will comply with the established modes of practice.*

Such a method or system of treatment must, however, be upheld by a consensus of opinion among members of the profession before the practitioner is bound to accept and follow it in his practice.*

There are probably many cases in which the physician and surgeon possessing the skill and ability required by law can not by the exercise of due care and diligence determine the particular disease or condition from which the patient is suffering. In such case, if he uses ordinary care and skill, and by the exercise of his best judgment determines upon a particular disease, and then applies the recognized remedy or mode of treatment for that disease, he is fulfilling his contract with the patient and doing all the law requires of him in the particulars considered. But if he experiments with some other mode of treatment he does so at his peril. Justice Goddard, in the case of Jackson vs. Burnham, said: "In other words, he must be able in case of deleterious results to satisfy the jury that he had reason for the faith that was in him, and justify his experiment by some reasonable theory."⁴

Duty to Instruct Patient and Nurse.—It is also incumbent upon the physician and surgeon to give all reasonable and necessary instructions for the proper treatment and care of the particular disease or injury for which he is treating the patient; and should injury result from his failure to exercise this precaution he will be held to respond in damages.⁵ This obligation extends not only to giving instructions for the period during which the physician is attending the patient, but also for the period of convalescence immediately following. Therefore a physician should, upon dismissing his patients, carefully tell them what to avoid, and advise them to exercise that care which in his judgment is best calculated to restore their natural health and strength.⁶

The physician should not, however, be held to anticipate and advise against improbable conduct on the part of the patient. Where, for instance, a patient who is under the care of a physician at a hospital leaves the hospital without informing the physician of his intent so to do, it will be unjust to hold the physician to the duty of anticipating the patient's departure and advising him to remain.

Does not Contract to Cure.—Without a special contract to that effect the physician and surgeon is never considered as guaranteeing that he will effect a cure, or even benefit his patients.⁷ A physician may, however, enter into such a contract by express agreement providing that he shall be paid only in case he effects a cure, and such a contract, when entered into, will be binding though no definite sum is named as the compensation for performing the cure.⁸ When no such contract is agreed upon, the physician will, upon performance of the cure, be entitled to a reasonable amount for such services, to be determined in the ordinary manner.

* Jackson v. Burnham, 10 Cal. 73.

⁴ *Ibid.*

⁵ Carpenter v. Blake, 60 Cal. 414.

⁶ Beck v. Grunwald, 18 Cal. 2d 114, 115.

⁷ Richards v. Whelan, 12 Cal. 2d 114, 115.

⁸ See, e.g., 10 Cal. 2d 114, 115; 12 Cal. 2d 114, 115; 14 Cal. 2d 114, 115.

⁹ See, e.g., 10 Cal. 2d 114, 115.

¹⁰ See, e.g., 10 Cal. 2d 114, 115.

Continuation of Attendance.—A physician may by special contract, when undertaking the treatment of a case, limit his attendance to a longer or shorter period, or may at any time during the treatment of the case discontinue his attendance by first giving reasonable notice of his intention so to do; but if he does not limit his attendance by express contract or give such reasonable notice of his intention to discontinue his visits, he is bound to continue his visits as long and as frequently as the requirements of the case may demand, and he is held to the use of ordinary care and skill in determining when his visits may be safely discontinued.*

Contagious Disease.—It is the duty of the physician, and he is impliedly contracts, to protect his patients in all reasonable ways from contagious and infectious diseases. If he himself has such a disease, and with knowledge of his condition visits his patients without apprising them of the fact, and thus communicates the disease to them, he is clearly guilty of a breach of duty. Moreover, it is his duty, in passing from patients who are afflicted with an infectious and dangerous disease to others who are not so affected, to take such precautions as experience may have shown to be necessary to prevent the communication of infection, and he will be held responsible for his failure so to do.† When the physician has effected a cure of a patient afflicted with a contagious or infectious disease, it becomes his duty to employ all proper and necessary means to disinfect the premises, and the law will protect him in fulfilling such duty, even though it may involve destruction of property.‡

Contract for Medical Treatment Includes Surgical Cases.—A physician who enters into a contract with a patient or with a third party, agreeing to give "medical" treatment or to "perform the duties of a physician" for a certain period of time, there being no express understanding regarding surgical cases, or nothing to show that it was clearly the intent that surgical cases should be excluded, will be required under the contract to perform surgical operations as well as to give general medical treatment during the period.§

Privileged Communications.—Last, but by no means least in importance, the physician contracts with his patients that he will preserve sacred and inviolable all knowledge which comes to him in a professional way. So sacred is this knowledge held that in many States the physician is not required to disclose the same in a court of justice without the patient's consent. Knowledge of this sort is technically known in the law as privileged communications. The questions arising under this privilege being many and varied, they are made the subject of a separate article.

Importance of the Foregoing Principles.—By way of general observation it may be said that the foregoing contracts and obligations implied on behalf of the physician form nearly the whole groundwork of the law regulating the subject of civil malpractice, and if the physician carefully remembers and applies this law he may hope to escape being required to face an injured patient

in a court of justice, and certainly to avoid being mulcted in damages.

(To be continued.)

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

Meeting of December 14, 1898.

The President, Dr. WALTER B. JOHNSON, in the Chair.

Multilocular Cysts of Both Ovaries.—Dr. GEORGE H. MALLETT presented specimens of multilocular cysts of both ovaries, and gave the following history: They were removed from a patient twenty-four years of age, married two years, who had her first child a year ago and a miscarriage six weeks ago. She began to menstruate at sixteen. She menstruated only once in two months until she was twenty-one years old, when she was married, and the menstruation then was regular until she became pregnant. In September she flowed for four weeks, and this was followed by a miscarriage. When she came under the speaker's observation he felt a large mass on the left side of the pelvis. She did not give any history of pain, but it was difficult to find the uterus, and he suspected ectopic gestation. When he opened the cavity, he found one ovarian cyst on the left side low down in the pelvis; the other was under the liver. The interesting point was, not the difficulty of diagnosis, for it was difficult to tell ectopic gestation unless the sac had ruptured, but the fact that the woman became pregnant twice with the ovaries in this condition, showing that women could conceive when the ovaries were in very bad condition.

The other specimen was a large cyst taken from a girl sixteen years and four months of age. She missed her menstrual periods four months after she came from abroad, and afterward noticed the enlargement. She had absolutely no pain and the family began to suspect pregnancy. The cyst was removed about three weeks ago. The pedicle was long.

Dr. BROOKS H. WELLS said it was rare to find cystic ovarian tumors of such an extremely irregular shape. Another remarkable thing was that the woman should conceive when there was apparently no normal ovarian tissue left. He believed in the advisability in many cases of leaving small bits of an ovary, if they were not absolutely diseased. A year ago last June he operated on a patient at the Polyclinic Hospital, removing from the right side an abscess which involved the ovary and tube. On the left side there was no pus, but there were a cystic ovary and a densely adherent tube. The ovary was removed, leaving only a tiny nodule, and the adhesions about the tube were broken up. Much to his surprise and gratification, the woman came back to the clinic last week four months pregnant. This result was most unexpected, as he had left the bit of ovary solely with the idea of lessening the nervous symptoms that might follow the premature menopause.

Dr. CLEMENT CLEVELAND said that in all his experience he had never seen two such specimens coming from the same woman and so unique. He spoke of the method that he employed in the ligation of the pedicle. He

* Ballou vs. Prescott, 63 Me., 295; Boon vs. Reed, 69 Hun, 426; Barbour vs. Martin, 62 Me., 556; Williams vs. Gilman, 71 Me., 21; Dashiell vs. Griffith, 83 Md., 263; Becker vs. Janinski, 27 Abb. N. C., 15.

† Piper vs. Menifee, 54 Am. Dec., 547; 12 B. Monroe, 465.

‡ Seavey vs. Prohle, 61 Me., 129.

§ Wetherell vs. Marion Co., 28 Iowa, 22; Clinton Co. vs. Ramsey, 20 Ill. App., 577.

had for a year and a half been using Dr. Skene's electric clamps on the pedicle for ovarian tumors and in pyosalpinx with great satisfaction. Dr. Skene had been experimenting for three or four years with this method, which was suggested to him by the old process of Dr. Keith, of Edinburgh, who used a hot iron, clamping and burning thoroughly, and reported that he never had a case of secondary hæmorrhage following its use. The speaker used the crude ones made a year and a half ago, but they had been improved since that time. The clamps were applied as an ordinary clamp would be. In the case, for instance, of an ovarian tumor with a pedicle, one might apply the clamp close to the uterus; then, if he had not the street current which he could modify by a transformer, use an ordinary battery with power enough to give six or seven amperes of electricity, carrying a heat of about 198° or 200° , so as not to burn the tissue, but bake or cook it, or rather desiccate it. These clamps were usually left on from two to three months; then the tumor was cut away and the clamps were slowly removed. If the heat had been uniformly applied, there was rarely any oozing. The stem, as it was cut off, appeared like a charred mass.

When the speaker first used this method he felt rather uneasy about his patients, but during the year and a half he had constantly used it he had never observed any secondary hæmorrhage. This process did away with the catgut or silk ligatures. The heat shut up the lymphatics; it was aseptic and antiseptic as well. On Saturday last he used it on a patient with carcinoma of the cervix, where it was difficult to find room to cut outside of the disease. The healthy tissue was clamped, the forceps applied, and the uterus removed in the usual way. This patient had been in bed for four days and had no pain whatsoever; she would have no idea herself, if she had not been told, that she had gone through a severe operation. The gauze packing had not yet been removed; he did not usually remove it till the sixth day. When he did remove it, he would give the patient a little chloroform, so that she would have no pain whatsoever. He thought if others would use the forceps, they would be as enthusiastic as he was. The tumors presented to the society could have been removed by the vagina if Dr. Mallett had known what they were, especially the multicellular which had a long pedicle, and by the electric clamp it could have been removed without being ruptured.

(To be concluded.)

Book Notices.

BOOKS, ETC., RECEIVED.

The Treatment of Disease by Physical Methods. By Thomas Stretch Dowse, M. D., A.B., F. R. C. P. Edin., Physician to the North London Hospital for Consumption and Diseases of the Chest, etc. New York: E. B. Treat & Co., 1899. Pp. xii 412. [Price, \$2 15.]

Lectures on Appendicitis and Notes on other Subjects. By Robert T. Morris, A. M., M. D., Adjunct Professor of Surgery in the New York Post graduate Medical School and Hospital, etc. Third Edition, revised and enlarged. With Illustrations by Henry Macdonald, M. D. London and New York: G. P. Putnam's Sons, 1899. Pp. x-185. [Price, \$2.]

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On Varix: Its Causes and Treatment, with Especial Reference to Thrombosis. An Address delivered at the Inaugural Meeting of the Nottingham Medico-chirurgical Society, Session 1898-1899. By William H. Bennett, F. R. C. S. Eng., Surgeon to St. George's Hospital and Joint Lecturer on Surgery in the Medical School, etc. Reprinted from the *Lancet*, October 15, 1898, with the Addition of Twelve Illustrations. London, New York, and Bombay: Longmans, Green, & Co., 1898. Pp. 53.

The Influence of Character and Right Judgment in Medicine. The Harveian Oration delivered before the Royal College of Physicians, October 18, 1898. By Sir Dyce Duckworth, M. D., LL. D., Hon. Fellow of the Royal College of Physicians of Ireland, etc. London, New York, and Bombay: Longmans, Green, & Co., 1898. Pp. 7 to 53.

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The Serum Treatment of Swine Plague and Hog Cholera. By E. A. de Schweinitz, M. D. United States Department of Agriculture, Bureau of Animal Industry. Bulletin No. 23.

A Case of Anthrax (Charbon). By T. S. Dabney, M. D., of New Orleans. [Reprinted from the *New Orleans Medical and Surgical Journal*.]

Adenoid Vegetations. By Ellet Orrin Sisson, M. D., of Keokuk, Iowa. [Reprinted from the *Annals of Otolaryngology, Rhinology, and Laryngology*.]

A Finger Protector for Handling the Head Mirror. By Emil Amberg, M. D., of Detroit. [Reprinted from the *Physician and Surgeon*.]

A Loop-former. By Emil Amberg, M. D. [Reprinted from the *Laryngoscope*.]

A Powder Blower which can be Sterilized. By Emil Amberg, M. D. [Reprinted from the *Physician and Surgeon*.]

Der Morbus Basedowii. Vortrag, gehalten auf der dreissigsten Wanderversammlung des allgemeinen ärztlichen Vereins von Thüringen zu Arnstadt am 26 August, 1898. Von Medizinalrath Dr. Schwördt, prakt. Arzt in Gotha. Jena: Gustav Fischer, 1898. [Abdruck aus *Münchener med. Wochenschrift und Correspondenzblätter des allgemeinen ärztlichen Vereins von Thüringen*.]

Miscellany.

The Disagreeable Results of Gelatin Injections for Hæmostasis.—According to the *Therapeutic Gazette* for January 16th, it must not be lost sight of that Deguy tells us in the *Journal des pédiatres* of November 12, 1898, that the subcutaneous injection of gelatin solutions is capable of producing the following disagreeable symptoms: A condition of fever may develop, ranging from two to three degrees above normal, and this may last for a day or two. It is apt to be present in the

evening and not in the morning, and sometimes is accompanied by chills and insomnia. The local accidents which follow its injection may be divided into three classes: First, pain, due to the injection, of a burning character, which is increased by pressure; secondly, a diffuse redness of the skin or pseudo-inflammatory process, violaceous in appearance, which disappears for a moment on pressure and then immediately returns; thirdly, a diffuse induration of the tissues, having very much the same sensation as the induration due to anthrax. Usually this lasts a number of days.

Chloral Eruptions.—The *Therapeutic Gazette* for January 16th in an editorial says:

"Two theories have been advanced to explain these eruptions. One is that the drug produces an angioneurosis or vasoparalysis, probably by an action on the vasomotor centres. The other theory is that some of the chloral is eliminated by the glands of the skin, and in its elimination produces local irritation. According to Aviragnet, these eruptions may be divided into two great classes. In the first they appear in the presence of conditions of the nervous system characterized by exaggerated excitability, as, for example, chorea, insanity, tetanus, general paralysis, also in transverse myelitis and after operative shock. In the second class of cases they occur in instances in which there is retention of chloral in the system, as, for example, in acute and chronic enteritis, eclampsia, hepatic disease, advanced tuberculosis, and abdominal tumors. Then, too, it is well known that the simultaneous administration of alcohol with chloral often causes dermal manifestations, and hot drinks given with chloral, particularly if they are copious, are apt to produce such effects. Of course, in the cases where chloral is applied externally it produces a direct local irritant influence."

Seeing through the Nose.—M. Douliot (*Revue médicale; Gazette des hôpitaux*, August 21, 1897; *Revue internationale de rhinologie, otologie et laryngologie*, December, 1898) reports the case of a man who, as was the case with several others reported in the sixteenth and seventeenth centuries, learned to see through his nasal cavities after the successive loss of both eyes. The right eye had been lost in childhood; the other eye, as well as the nose, had been lost in a fall upon a stake. A year later he perceived that he was able to distinguish through the nasal aperture the light of day, and also brilliant objects placed beneath it. It is considered probable that the retina had been spared, and that there remained an opening of communication between the nasal fossae and the orbital cavity.

The Highest Causes of Mortality in the City of Mexico.—According to the *Boletín del Consejo superior de Salubridad* for December, 1898, out of 1,313 deaths occurring in the city of Mexico in the month of November, 125 are credited to tuberculous affections, 105 to acute bronchitis, 117 to pneumonia, and 212 to diarrhoea and enteritis. These are the only specified causes that reach triple figures, the next highest being gastro-enteritis, the stated cause of death in 61 cases.

A Simple Operation for Ingrowing Toe Nail.—Dr. J. G. MacCallum (*Massachusetts Medical Journal*, January) records a method of treatment which he tried first *in propria persona*, all the usual methods having failed. He says: At length the following course was pursued:

A triangular notch was made midway in the free edge of the nail, extending to its body. From the pointed margin of this notch a furrow was made, as near to the quick as possible, without penetrating it, through the middle of the root as far as the duplicature of skin; a piece of cork was then inserted under the nail, whose bulk was large enough to extend a few lines on either side of the notch, as well as to compactly fill, without uneasiness, the interspace between the skin and extremity. This completed the "operation."

In a few hours relief was marked, rapid improvement followed, and in a very short time it was quite evident that the cure was complete. The elevating tendency of the piece of cork caused the corners to be raised from the inflamed flesh, while at the same time the furrow through the centre allowed the nail to flatten and the burrowing edge of the ingrowing corner to eventually pass over and beyond the limited space of its former confinement. Thus, it is plain, all the indications of cure were fulfilled.

Since then he has pursued this plan of treatment alone in such cases, and in every one with unflinching success.

Schlatter's Case of Removal of the Stomach.—Schlatter (*Lancet*, November, 1898; *International Medical Magazine*, January) communicates his further observations on his case of complete removal of the stomach. The patient's weight has increased eighteen pounds and a half since the operation. Her general condition is excellent, and she is able to partake of ordinary diet without any inconvenience other than a feeling of pressure in the epigastrium and in both hypochondriac regions after a hearty meal. A quantity of milk amounting to ten fluid ounces and a half is quite capable of producing this feeling of pressure. Her digestive capacity can be judged from the following diet lists: January 17th: Milk, thirty-three fluid ounces; coffee, thirteen fluid ounces; three rolls; three eggs; soups, three fluid ounces and a half; fried sausage, four ounces; stewed apples, seven ounces; whortleberries, three ounces, and claret, seven fluid ounces. February 5th: Milk, eleven fluid ounces and a half; three rolls; three eggs; soup, four fluid ounces; sweetbreads, ten ounces and a half; cauliflower, seven ounces, and claret, seven fluid ounces. March 4th: Milk, ten fluid ounces and a half; coffee, seven fluid ounces; soup, four fluid ounces; roast veal, four ounces; carrots, fourteen ounces; four rolls, and claret, seven fluid ounces. Her animal food varied between roast veal, Vienna steak, chops or cutlets, beefsteak, fried sausage, brain, sweetbread, and fowl. Analyses of urine and faeces showed a diminution of chlorides and nitrogen indicating an abundant absorption of albumin. Microscopical examination of the faeces revealed an entirely normal condition. There were no putrefactive changes present, proving that the entire absence of the gastric juice, with its HCl, is without any influence on the extent to which putrefactive decomposition is developed in the intestine.

Ovarian Calculi.—Ries (*Annals of Gynecology and Pediatrics*, November, 1898; *International Medical Magazine*, January) reports observations made in three cases seen in one year. The fragments of two of the ovarian calculi were submitted to qualitative analysis and both were found to be composed of a mixture of organic and mineral compounds; the former consisted

chiefly of fibrous materials with minor quantities of fat and cholesterolin, while the mineral matter was made up of the carbonates and the phosphates of calcium and magnesium, with unimportant traces of chlorides and sulphates, presumably of sodium and potassium. The convolutions of the surface of the stones resembled exactly inside, as well as outside, those of the corpus luteum, and undoubtedly took their origin in simple corpora lutea.

Lymph-gland Juice in the Treatment of Cancer.—According to the *International Medical Magazine* for January, Snow (*Lancet*, October 15, 1898), basing his opinion on the fact that the malignant disease varies in its progressive infection of the lymph glands and seldom, if ever, invades those lying above the seat of disease on the lymph stream, advances the theory that these lymphatic glands act not only as filters but also in some way destroy the infecting cells which come to them in the lymph stream, and that the final involvement of the gland only occurs when the lymphatic gland has used up all its resisting power in the contest with the disease. He advocates the administration of a lymph-gland juice containing as nearly as possible the physiological elements of the glands in their natural state, hoping in this way to increase the nutrition of the glands and their power to overcome the infecting elements. He has already seen results which make him feel that the theory is not entirely without foundation and that it coincides with the general trend of modern scientific medication, which administers to the patient that natural element which antagonizes the disease but is not present in sufficient quantities in the particular individual attacked. He hopes, by advancing the theory, to arouse the interest of experimental physiologists who can carry on the research in this direction scientifically.

Born in an Elevated Sphere.—According to the *Chicago Medical Recorder* for January, Dr. E. A. Lightburne writes in the *Lancet* that he had been called a few days previously to attend a woman about to be confined on the top of a tramcar in Bow-road, London. On getting there he found the car on a siding and surrounded by a cordon of police to keep the crowd at a respectful distance. With the assistance of the police-matron and a bull's-eye lantern everything passed off very satisfactorily, the woman being safely delivered of an infant weighing eight pounds and a half.

Mud as a Health Food!—According to the *St. Louis Clinique* for January, it is a fact that a charlatan "professor" gave a lecture recently in Denver in which he delivered himself as follows:

"And now I am going to make known the greatest discovery ever made by mortal; every one hold fast to his chair and keep calm." A wave of expectancy swept over the vast audience and, amid a deathlike silence, the professor continued: "In my stupendous investigations of animal life I have discovered that dogs, horses, pigs, etc., were not troubled with dyspepsia, rheumatism, consumption, appendicitis, hysteria, and other ailments. I observed that all animals were very much given to eating dirt; this suggested the thought, Why not do like wise? and under the inspiration of the idea I commenced to eat dirt, and have been doing so ever since, with the result that my physical ailments have departed and I stand before you to-night the most healthy man in America. I guarantee, if any individual will take three doses of dirt a day, it will cure every disease that is

known to the medical profession. There is only one brand of dirt, however, that I can safely recommend, and it comes from the banks of the dear old Missouri River. Anticipating a large demand for it, I took the precaution of having a large consignment shipped to Denver. I have had this great Nature's remedy put up in neat boxes which will be sold at popular prices. Special rates will be made to large families and public institutions on keg and barrel lots. I will guarantee that it is the quintessence of the banks of the Missouri River."

The writer states that there were fools enough in the audience to enable the "professor" to exchange a large quantity of his Missouri realty for hard-earned dollars.

Abscesses of the Liver.—Dr. Edward E. Feild (*Georgia Journal of Medicine and Surgery*, December), in a paper read before the Virginia State Medical Society, said that among the predisposing causes of abscess might be mentioned:

1. Alcoholism.
2. Residence in tropical climates.
3. Any abnormal condition of the parenchyma caused by malaria, syphilis, new growths, cardiac insufficiency, renal insufficiency, hyperemia of liver, anemia of liver, tuberculosis.

It was reasonably certain, he said, that syphilis and tuberculosis did not directly act as exciting causes of abscess, but that the gummata of the former and the broken-down nodular masses of the latter offered a suitable nidus for the development of any of the pus-forming germs which might be present in the systemic or portal circulation.

While some authorities claimed that in abscess in infants tuberculosis was the exciting cause, the foregoing seemed the most rational explanation. It had also been pretty clearly demonstrated that malaria was only a predisposing cause, as the organism of Laveran seemed to cause a degeneration of the hepatic cells and had never been known, *per se*, to produce pus under any other circumstances.

Renal insufficiency from sclerosis, causing an imperfect depuration of the blood and a consequent increase of hepatic activity and hyperemia, and cardiac lesions inducing congestion, predisposed to abscess. The effects of alcohol were too well known to need further comment.

Residence in hot climates was undoubtedly the most frequent predisposing cause of hepatic abscess. Europeans resident in India were often attacked with abscess through disregard of the hygienic rules of the tropics, although the disease was also prevalent among the natives.

Men seemed to be more subject to the disease, owing to their greater exposure to alcohol and syphilis, the proportion being about thirty men to one woman.

Among the exciting causes of liver abscess should be mentioned in the order of their relative frequency: (1) Dysentery (mainly tropical dysentery), in which the *Amoeba coli* was generally present as a causative factor; (2) extension of inflammation from adjacent structures; (3) pyelophlebitis; (4) phlebitis of umbilical vein; (5) suppurating hydraditis; (6) actinomycosis; (7) trauma; (8) suppurating of gall bladder; (9) typhoid fever; (10) tuberculosis.

Tropical dysentery seemed by far the most frequent cause of liver abscess.

The author quoted Manson's figures as conclusive, as

to the existence of an intimate relationship between tropical dysentery and liver abscess. There was good reason, however, for believing that, while they represented the truth, they did not represent the whole truth, and that the association was even more frequent than they indicated. In a large proportion of cases of liver abscess the *Amaba coli* could be demonstrated.

The author then quoted a case to illustrate the connection between dysentery and abscess of the liver.

Symptoms.—Usually, when the patient came under observation, the symptoms of hepatic abscess were weight and fullness in the right hypochondrium; pain of variable intensity, but usually dull and aching, often referred to the right shoulder; tongue heavily coated; the bowels usually moved frequently, and the stools might or might not be acholic, as pressure from the abscess might affect the bile duct. There was usually insomnia. The temperature was variable, as in other cases of hectic, sometimes being subnormal and then suddenly rising to 104° or 105° F. The decubitus was right lateral or dorsal, usually with the knees drawn up. Palpation showed enlargement of the liver, often extending as low as the umbilicus. The enlargement was by no means symmetrical, but extended in whatever direction the abscess was located. There was often tenderness on pressure or percussion over the liver. The respiration was shallow and more frequent than normal. Rigors were not uncommon, and the patient often had night sweats. Rapid emaciation was the rule. The complexion was generally muddy and cachectic in appearance, but distinctly marked jaundice was rare. The spleen was rarely enlarged. A dry, hacking cough, evidently a reflex from irritation of the diaphragm or from an inflamed condition of lung or pleura over the seat of the abscess, was not unusual. Should the abscess discharge through the lung, the cough might be very severe and sometimes cause vomiting. It should be borne in mind that hepatic abscess often closely simulated malarial disease, and where there was a doubt of the diagnosis quinine should be withheld until the blood could be examined for the plasmodium. Manson thus emphasized the similarity of the symptoms of the two diseases:

"Perhaps the most common error was to regard the hectic of the liver abscess as attributable to malaria. The regularity with which the daily fever recurred, the daily chilliness or even rigor coming on about the same hour, the profuse sweating, and other circumstances so compatible with a diagnosis of malaria, all contributed to this mistake. So common was the error that Osler says he hardly ever meets with a case of liver abscess which has not been drenched with quinine. The author's experience was the same. He had seen medical men make this mistake not only in their patients but in their own persons. If carefully considered, there were several circumstances which should obviate so serious an error.

"1. No uncomplicated ague resists quinine in full doses.

"2. In malaria, if the liver is enlarged, the spleen is still more so; the reverse is the case in liver abscess.

"3. The plasmodium can not be found in the blood in nonmalarial hepatitis.

"4. In liver abscess the fever is almost invariably an evening one; in malaria it most frequently comes on earlier in the day.

"5. Quotidian periodicity, contrary to what is the case with tertian or quartan periodicity, is by no means pathognomonic of, nor peculiar to, malaria.

"6. The almost invariable history of antecedent dysentery, or at least of bowel complaint, in liver abscess."

Treatment.—When the diagnosis of abscess had been satisfactorily made, the author said the only rational treatment was to evacuate it as soon as practicable.

First, a point of fluctuation should be ascertained, if possible, or even a probable point of suppuration, and an aspirating needle introduced under strict aseptic precautions. A rather large needle should be used, as liver pus was generally very thick and would not pass through a fine needle. The needle should be pushed deeply into the liver and the piston pulled back, when, if pus did not flow, the needle should be slowly withdrawn in order that any pus which might have been traversed by the needle might drain into its lumen. Under no circumstances should the piston be pushed down during the removal of the needle, lest pus be forced into the peritoneum or pleura, but the vacuum should be maintained.

If no pus was found, the needle should be withdrawn until the point was near the walls, and, its direction being changed, it should be reintroduced as in the previous manner.

This procedure could be repeated several times without danger, with careful asepsis. It should be done under anesthesia, as it was quite painful, and if the pleura was punctured might give rise to unpleasant reflex symptoms. It was claimed by some writers that even if no pus was found this procedure would often relieve the existing symptoms.

Having located the abscess, the needle should be left *in situ* and a dissection carefully made down until the peritoneum was reached, if the incision was below the costal line, and if adhesions to the liver were satisfactory the liver should be opened and the abscess explored with the finger, due regard being had for the adhesions. If there were no adhesions and the case was not extremely urgent, the wound should be packed with iodoform gauze for forty-eight hours, or until adhesions were sufficiently strong to prevent infection of the peritoneum. If the case was urgent, the capsule of the liver should be sutured to the edges of the wound before opening the abscess.

If the abscess was covered by the ribs it would be necessary to resect about three inches of at least one rib, and, after stitching together the right leaflet of the diaphragm and the capsule of the liver, to open the abscess as in the preceding case. In either event the hemorrhage would be considerable, but could usually be pretty easily controlled by packing around the tube, which should be of glass, five eighths of an inch in diameter and fenestrated. After washing out the abscess with hot saline solution or sterilized water a heavy dressing should be put on and an abdominal binder applied. The after treatment should consist in irrigation and dressing the wound at least once a day. In order to cause the tube to drain properly it should be packed loosely with sterilized gauze for its capillary effect. Owing to contraction of the liver after evacuation of the abscess, the direction of the tube would often be so changed as to necessitate sometimes the use of a curved tube.

The bowels should be kept open. Tonics and a generous diet should be given to combat the large drain from suppuration. It was well to put the patient in a rolling chair as soon as possible after the operation and wheel him into the open air.

Every precaution should be used to prevent bedsores. The patient should recline on the right side as much as possible to facilitate drainage.

Tolerance of Two Bullets in the Brain.—M. Maurice Pollosson (*Lyon médical*, January 1st) recently presented to the Surgical Society of Lyons a patient who fired two bullets into his brain two months previously. Skiagraphy showed one of them to be situated within the frontal lobe of the brain, while the other rested on the orbital vault. There were no cerebral symptoms, but some ocular troubles—retraction of the visual field and dilatation of the pupil. Ophthalmoscopic examination showed anæmia of the papilla and dilatation of the veins. The condition of the vision tended toward improvement.

A Case of Generalized Epilepsy, with Death during an Attack; Yellow Softening and an Osteophyte found on Autopsy.—M. Devay (*Lyon médical*, January 1st) reported to the Society of the Medical Sciences of Lyons the case of a man, a painter and plasterer by trade, eighteen years of age, epileptic from his eighth year. The attacks, rare at first, had not interfered with his intellectual or physical development. He was about five feet four inches in height, and carried the head habitually bent forward. His physiognomy expressed some hebetude. He could read and write fluently without errors of orthography. His memory was good. M. Devay was present during several accesses, which were always of the same fashion. He always fell forward, and his face showed numerous traces of his falls, which took place without any cry, but with pallor of countenance. Convulsions, at first tonic, then clonic, appeared, and were always generalized. They were often accompanied by involuntary micturition and biting of the tongue. There was no aura. There were neither motor nor sensory troubles. The heart was normal, the genital organs well developed, and there was no lung trouble. The crises had reached the number of sixty-two in a month, though they fell later to twenty-three. He had been treated first with large doses of bromides (salt not specified) without improvement, and subsequently with oxide of zinc in daily amounts of from three to six grains, without effect. The drug was well tolerated. The substitution of powdered ipecacuanha in progressive doses, rising from one thirty-third of a grain to three grains daily, was equally without result. This treatment was continued up to the time of death without provoking nausea.

At the autopsy the thoracic and abdominal organs were found normal. The brain showed no adhesions save at a point in the left hemisphere at the union of the inferior parietal convolution with the first temporal. At this level there existed a depression the size of a fifty-centime piece, of the color of yellow ochre. On passing the finger over this focus of softening, after removing the cortex, the presence of a hard spot was determined. When caught with a forceps this hard body clung tenaciously to the brain substance, into which it seemed to send processes. The body was found to have the shape of an irregular pyramid. It was hard, glistening, and gave to the touch the sensation rather of bone than cartilage.

The author says that the autopsy presented the following points of interest: 1. From the view point of cerebral localizations the softening situated in the vicinity of the centres of verbal blindness and verbal deafness, and more especially at the level of the centres of movement of the upper eyelid, was not revealed in life by any clinical symptoms. It may be supposed that these were convulsive movements of the upper eyelid at

the beginning of the crisis, but the patient falling always on his face gave no opportunity of establishing this. 2. The existence of generalized epilepsy in association with a localized cortical lesion. 3. The existence in the zone of softening of a foreign body of osseous appearance and consistence, whose discovery was a veritable revelation of the autopsy.

The Gullibility of the Public.—According to the *Boston Medical and Surgical Journal* for January 19th, the *Practitioner*, in an interesting account of Sir William Jenner, in which his professional honesty and even bluntness is commented upon, gives the following excellent anecdote of another distinguished physician who had certain qualities which Jenner lacked. The story is taken from the *St. Bartholomew's Hospital Journal*: "Dining one evening in the company of some medical men, among whom was Dr. Martin, then physician to 'Bart's,' Sir William Gull declared that some amount of quackery was essential to success in medicine. 'It is an example of the old saying,' he averred, '*Populus vult decipi*.' The host asked for a terse English equivalent. 'Oh, that's easy enough,' said Dr. Martin quickly: 'The public like to be gulled!'"

Eruption due to Benzoate of Sodium.—M. Hébert (*Normandie médicale*, January 1st) describes a case of eruption due to the administration of benzoate of sodium. Upon the abdomen were large erythematous patches of irregular contour and in places confluent. Their color was a sombre red, and they became effaced under pressure. On the back and neck of the patient were some papule on an erythematous area. On the anterior and internal surface of the right lower limb, especially just above and below the knee, were large patches similar to those on the abdomen, but more livid in color. There was intense pruritus over the abdomen, and especially on the right thigh, causing severe scratching. The eruption disappeared on discontinuance of the drug. No antiprurine had been taken.

The Meharry Medical College.—The commencement exercises of the Meharry Medical College were held, according to the *Nashville American* for February 2d, at the Tabernacle in Nashville on February 1st. The medical department of the Central Tennessee College was established in 1876 as the first medical school opened in the Southern States for the education of colored physicians. At the commencement exercises Dr. Arthur J. Moore spoke on the Negro Physician as a Factor in the Solution of the Race Problem, and paid a high tribute to the white physicians for the friendly aid which they had extended to the negro physicians. William H. Lanester spoke on The Age of Pharmaceutical Progress, and Dr. J. C. Gaston delivered the medical valedictory, choosing as his subject The Qualified Physician a Necessity. He referred particularly to the possibilities of the physician in raising the standard of the mothers of a race, and made a strong appeal for personal individual culture along every line of thought and of the most thorough nature. Other speakers were Mayor Dudley and Dr. W. T. Rodgers. The Meharry Medical College owes its origin to the descendants of Alexander and Jane Meharry, who were of Scotch Irish descent and came to this country in 1794. Several Meharry graduates responded to President McKinley's call for volunteers in the recent war, and served in various capacities as surgeons, hospital corps men, etc. The course of study at

the McHarry Medical College is thoroughly graded and four sessions of five months each are required to complete it. The method of instruction differs from that which is followed by most medical colleges and is more like that pursued by literary schools. Daily recitations from text-books are required in anatomy, chemistry, and physiology during the first session; in anatomy, physiology, and materia medica during the second; while during the third and fourth, lectures and recitations are combined. Laboratory work in chemistry is required for three sessions.

Sir Joseph Fayrer.—*Janus* for January and February publishes a very interesting account, accompanied by an admirable portrait of Sir Joseph Fayrer, veteran surgeon-general of the British army. Sir Joseph was the son of Commander Fayrer of the royal navy and first entered the navy as an assistant surgeon, but subsequently resigned his commission in that service and entered the army. Sir Joseph Fayrer served in Lucknow through the siege during the Indian mutiny. His contributions to medical literature have been as varied as valuable.

Test for Iodoform Intoxication.—According to the *National Medical Review* for January, the following means (*Buffalo Medical and Surgical Journal; American Journal of Surgery and Gynecology*, 1898, xi, 119) may be resorted to for demonstrating in time a threatened iodoform intoxication, a condition which is not rare in surgical and gynecological practice: A test is made of the urine to note the quantity of iodine which is eliminated by it. A small pinch of powdered calomel is placed upon a white saucer, and then a few drops of the urine to be examined are dropped upon it; a mixture of urine and calomel is then made with a glass rod. If the urine contains a notable amount of iodine there is produced a well-marked yellow discoloration, which should indicate that the iodoform is being absorbed in sufficient quantity to produce danger.

The Treatment of Pott's Disease.—Dr. Galloway (*Canadian Journal of Medicine and Surgery*, February), in a paper entitled *Should the Deformity in Pott's Disease be Forcefully Corrected?* sums up his conclusions as follows:

"1. Sufficient experience with the operation of forcible reduction of the deformity in Pott's disease has been accumulated to enable each surgeon to decide whether the procedure is or is not at present justifiable. 2. The theoretical dangers of the operation have not received much support in practice, enough, however, to demand that they be taken into account. 3. Calot reports better results and appears to be more hopeful than any one else. 4. We should be justified in performing the operation if we could be sure of ultimate good recovery without deformity or with greatly diminished deformity. 5. Satisfactory evidence that the ultimate result will be good is wanting, while the *post-mortem* findings quoted are anything but reassuring. 6. Our knowledge of the behavior of tuberculous bone does not make us hopeful regarding the filling in of the gap created by the operation, and the admitted tendency of the deformity to relapse after correction increases doubt on this point. 7. Surgeons should cease performing the operation, and wait patiently until the ultimate results in a considerable number of the cases already treated have been determined; not condemning the operation in the meantime, but simply holding it *sub judice*. 8. As

an exception to the conclusion just stated, cases complicated by paralysis which can not be cured by other means should, in the absence of contraindications, be submitted to forcible reduction, as there is abundant evidence to show that the operation usually cures or improves the paralysis promptly. Very early cases with slight deformity may perhaps also be attempted. 9. The tendency to simplification of the original operation shows distrust for Calot's method, or points to its being unnecessarily radical. The method described by Goldthwait is simpler and more reasonable. 10. As a result of the world-wide discussion of this subject some advance in the treatment of Pott's disease may be anticipated."

Substitutes for Tuberculin in Diagnosis.—Dr. R. C. Cabot and Mr. J. J. Whoriskey (*Journal of the Boston Society of the Medical Sciences*, January 17th) have made experiments to test the comparative values of "artificial serum," somatose, and tuberculin as an aid to the diagnosis of tuberculosis. Check experiments were made in each case. The artificial serum was made according to the following formula: R Sodium chloride, 5 parts; sodium sulphate, 10 parts; distilled water, 1,000 parts. From fifteen to twenty cubic centimetres of this solution were injected subcutaneously with antiseptic precautions, and the course of the temperature watched for twenty-four hours. The somatose was used by injecting a cubic centimetre and a half of an aqueous solution of somatose. In some cases a one-in-one-hundred solution (representing a quarter of a grain of somatose), and in others a one-in-thirty solution (representing three quarters of a grain) was used. Twenty-one cases were tested with tuberculin. Dr. Cabot's conclusions are as follows:

"1. The tuberculin test in cases of doubtful tuberculosis can be safely and efficiently carried out under the conditions existing at the out-patient department of a hospital. 2. The substitution of sodium-chloride and sodium-sulphate solution proved, in my hands, a total failure. 3. The use of somatose, while somewhat more successful than that of salt solution, and while deserving of further study, has not shown that the regularity of its action is at all comparable to that of tuberculin."

Methods of Preserving Needles, with Recommendation of a New One.—At a recent meeting of the New York Surgical Society, Dr. Dawbarn (*Annals of Surgery*, February) recommended the use of a saturated solution of washing soda in water, for the purpose of preserving surgical needles. He stated that in his opinion this method of keeping the needles and cutting instruments untarnished was superior to any other which had thus far come within his experience. He showed needles kept bright in this way for a year and more. Most of the other methods are open to some objection. Perhaps the most common method is to sew the needles into an oiled cloth, but even this does not always prevent flecks of rust. As to keeping them in carbolized oil, this to some extent dulls the edge of the needles just as carbolic acid in watery solution does that of scalpels; lysol being a dark solution, the needles are not very easily seen in it; calcium chloride in a closed place to keep the air dry, with the needles lying on a dish near it, produces a curious tarnish, almost like rust; in Fuller's earth or other powders it is difficult to find the smaller needles; in alcohol, unless it is absolute (and absolute alcohol ceases to be absolute very soon), the

needles will finally rust. A solution of borax in water, as recommended by M. Maréchal, will also rust the needles as soon as the thin plating, which all needles have at first, becomes worn away from usage, exposing the steel beneath. Perhaps keeping needles in alcohol is almost as good a way as that under discussion; its only objection being the unpleasant oiliness. Calcium chloride in absolute alcohol—thus keeping it absolute—is effective, but comparatively expensive. The same is true of placing a sheet of gelatin in the absolute alcohol, the gelatin by its affinity for water keeping the alcohol absolute.

The method now advocated—washing soda dissolved in water to saturation—is without expense, and has been proved to be reliable.

More "Tips" for Practitioners: On the Diagnostic Value of Facial Expression.—Dr. F. E. Wiedemann (*Indiana Medical Journal*, January), in a paper read before the Vigo County Medical Society on this subject, generalized some often neglected information as follows: He said that to the casual observer the tuberculous, thickened, or flat nose meant nothing more than uncomeliness, but to Kaposi it meant intemperance, struma, or syphilis. Were we to be consulted for hemorrhoids in a woman presenting a red-tipped nose, we should be justly criticised by our wiser colleague if we did not give attention to the digestive tract.

Laycock placed great stress on the development of the external ear as significant of a corresponding development of the brain, the circulation and nutrition of which coincided to a similar state in the encephalic tissue. In what way the confluent ear and adherent lobule were often associated with cerebral deficiency he could not tell, but such was the case.

Any shrewd diagnostician could make the diagnosis of gout by observing that characteristic tense, red, and shining skin of the ear; or from the presence of small concretions beneath the skin of the helix; and there could be no doubt of a diagnosis on seeing the hæmatoma auris, or insane ear.

Much attention had been called to the diagnostic value afforded by the teeth, especially in regard to syphilis. He well remembered how much stress his professor of dermatology gave to the crescentic notch in the incisors, a condition almost absolutely diagnostic of inherited syphilis. Yet, he said, we must not confound the syphilitic teeth with the pitted or crazy teeth, as they signified one of the various cachexia, and had no relation to syphilis.

Although the eye had unlimited expression, yet its diagnostic value was great—so great that no one would offer the diagnosis of jaundice or profound anemia or uremic poisoning without first consulting the eye. He who once saw the prominent, staring eyeball would never need to be told that the case was one of exophthalmic goitre. The altered appearance of the eye in cataract, pterygium, or glaucoma needed no description. If we remembered the origin and distribution of the third, fourth, and sixth nerves, we could very often surmise a diagnosis. The two forms of areus senilis, the fatty and calcareous, were interesting, but must be carefully separated. The fatty form was usually associated with fatty degeneration of the heart, while the calcareous variety was consistent with excellent health.

In considering the innervation of the face, we might expect to find the evidence of anxiety and cerebral irritation in the upper facial zone, about the forehead and

eye, and the expression of bodily pain in the lower half around the nose and mouth. We should as readily expect to find the elevated upper lip and partial exposure of front teeth in a case of peritonitis as we expected to find abdominal tenderness.

The spasmodic "grim" risus sardonius, was almost diagnostic of tetanus, and what skilled accoucheur could not determine the welfare of his patient by closely observing her facial expression?

In diseases of children, facial expression was of the utmost importance, and was entitled to special study and consideration. A non-observing physician would never be skillful in treating infantile diseases. To that physician lividity induced by exertion and excitement, with normal respiration, meant little, but the observing physician had learned that it indicated malformation of the heart and vessels.

Temporary lividity sometimes occurred in acute diseases. What did the congested cheek of the child mean? We all expected to find in such conditions a febrile or an inflammatory disease, as surely as we looked for cerebral disease in transient circumscribed congestion of the face, ears, and forehead.

Other diagnostic signs in cerebral diseases were the oscillation of iris, inequality of pupils, and drooping of upper eyelids. Dilatation of the alae nasi during inspiration, with a contraction of the eyebrows and a countenance indicative of suffering, were associated with severe inflammation of the respiratory organs. Why did we anxiously ask the mother if the baby had tears during the act of crying? Because we had observed that the absence of tears meant a severe and probably a fatal prognosis.

In severe diarrhoeal troubles the rapid wasting of the features, causing deep suborbital depressions, prominence and pointiness of the cheek bones and chin, and hollowness of the cheek, were certainly too well known to need more than mention.

Hypertrophy of the brain was denoted by great expansion of the cranium above the ears, with but slight, if any, enlargement of the frontal portion.

If we were asked as to a prognosis in regard to an infant suffering from some cerebral or intestinal malady, we should have no hesitancy in pronouncing a most unfavorable prognosis were we to find a thick Meibomian secretion of a puriform appearance collecting between the eyelids.

Alteration of the face from facial paralysis, according to some writers, was of little account save for the ptotic effect; but when we stopped to think and remember the origin of the foramen of exit, the distribution and function of the cranial nerves, to his mind we need know little more for a correct diagnosis and prognosis. For example, in a case of facial paralysis the patient presented a striking condition. The right half of the face was expressionless; the wrinkles in the forehead were erased; the eye was abnormally wide open and possibly watery; the corner of the mouth drooped, and the patient was unable to completely close the eye, and complained only of tenderness and pain in the right ear; still, he was anxious to know if he would always remain paralyzed. What were we to do? First, ascertain the muscles involved; know the anatomy sufficiently well to give each muscle its respective nerve; then trace the nerve peripherocentrally through the substance of the parotid gland, the stylomastoid foramen, the aqueductus Falloppii, emerging through the meatus auditorius internus to its origin between the olivary and

restiform bodies. But long before we got to its origin we might discover in the region of the petrous portion of the temporal bone some trouble with the mastoid cell or some carious condition of the petrous bone. We should then have no difficulty in giving a prognosis.

Of course, in mild forms of facial paralysis, usually of a rheumatic type, the affection was usually referred to the facial muscles; but, as a rule, there was no difficulty in distinguishing between mild facial paralysis due to peripheral irritation and one of severe form where there was complete reaction of degeneration in the nerve and muscle. In connection with severe neuralgia, there might occur a contraction resulting in what has been called "histrionic spasm."

Dr. Ord's description of myxœdema was so full, and showed so clearly the importance of the study of physiognomy, that the author reproduced it *in extenso*:

The face, said Dr. Ord, was swollen in every feature, so as to suggest the existence of renal disease; the swollen skin was singularly waxy looking and anæmic, and the swelling affected dependent and non-dependent features equally. Thus the upper and lower lips were uniformly enlarged; the alæ nasi were thickened and broadened; the ridges of expression were blurred or coarsened, or the lines obliterated. The cheeks were overspread with a dull pink flush, abruptly limited toward the orbits, and standing in vivid contrast with the anæmic skin around. The face wore a fixed, heavy, and withal most sad expression.

If we would cultivate the faculty of observation more, Dr. Wiedemann said, we could sit in our office and read the diagnosis of almost all diseases on the physiognomy of our patients.

The Pathology of Acute Infective Amygdalitis.—Dr. Goodale (*Journal of the Boston Society of Medical Sciences*, January 17th), as a result of careful microscopical researches in the laboratory of the Massachusetts General Hospital, concludes that "acute amygdalitis due to infection by the *Streptococcus pyogenes* and the *Staphylococcus pyogenes albus* and *aureus* is characterized histologically by a diffuse inflammation of the parenchyma of the organ, appearing in the form of an increased proliferation of lymphoid cells and of the endothelioid cells of the reticulum, due probably to the absorption of a toxine formed in the crypts. While bacteria are rarely demonstrable in the tonsillar tissue in cases characterized by purely proliferative lesions, yet at times infection of the interior of the follicle occurs, giving rise to circumscribed suppuration and the formation of abscesses which eventually discharge into the crypts."

The Counter Attack of the Military on the Medical Service.—According to the *Lancet* for January 7th, "The *Derby Telegraph* for December 27, 1898, quotes a correspondent to the fact that 'there is a strong feeling throughout the medical profession in this country that the time is ripe for a new medical act.' We are quite certain that the law should be better able to deal than it is with offenders who are found guilty of posing as medical men, and the columns of the *Derby Telegraph* for January 2d supply us exactly with a case in point. It is the account of an inquest held at Derby. The deceased was a little three-year-old boy, and the day before his death a Captain Fielden had given his mother some ointment to rub on his head. The mother of the child said that she did not know whether Captain

Fielden was a qualified medical man, but the word 'dispensary' was on his window. Captain Fielden was next called and said that he was a retired captain of the Scots Fusiliers, that he amused himself by doctoring, and examined and prescribed for children and adults in the ordinary way only, making no charge. He added that he had been in hospitals and therefore felt competent to diagnosticate cases, that he 'would give certificates for death or burial if the coroner would let him,' and that 'qualified men were not allowed to use good remedies like he did,' as to do so was 'against medical etiquette.' The witness was then told by the coroner to write down the constituents of the ointment which had been rubbed on the head of the deceased just before death. Dr. W. Spettigue, of Derby, having informed the coroner of the real cause of the child's death, said that the ointment in his opinion had not accelerated the fatal termination, evidence which for the time being saved Captain Fielden from serious consequences. The coroner has, however, reported the facts to the proper authorities, and there ought to be some way of compelling the ex-officer of the Scots Fusiliers to cease from deceiving his poor ill-educated neighbors with his pretensions to medical skill."

We suppose that it was from "combatant" officers of this type that the strenuous opposition came to the now accomplished formation of the Royal Army Medical Corps. Was the gallant officer entering on a reprisal for fancied injuries?

Operative Measures for the Cure of Pruritus Vulvæ.

—Dr. E. C. Dudley (*Peoria Medical Journal*, January) says that when apparent causes have received due attention and the disease has resisted all other treatment operative interference may become necessary. Saenger's conclusions on this point are based upon experience, and deserve attention. He says: 1. The partial or total extirpation of the vulva is a legitimate operation that should often be performed in chronic, otherwise incurable, pruritus vulvæ, which he calls *vulvitis pruriginosa*. 2. The removal also of the glans clitoridis, especially in elderly women, is permissible. Its nerve terminations have usually lost their specific sensibility by reason of the disease. 3. In younger individuals, if the irritation is circumscribed, one may try to give relief by a partial operation without removal of the clitoris. 4. In elderly women, when the disorder is extensive, the whole vulva should be extirpated and the parts repaired by a corresponding plastic operation.

Poisoning by Bromoform.—Mueller (*Münchener medizinische Wochenschrift*, 1898, No. 38; *Giornale internazionale delle scienze mediche*, December 15, 1898) reports the case of a male child, aged two years, who was given ninety minims by mistake. Death ensued, with vomiting, convulsions, and asphyxia, after about four hours. The autopsy showed extensive blood dilution and marked injection of the cerebral and meningeal vessels. There are in all twelve cases published of bromoform poisoning. The stomach pump, artificial respiration, apomorphine, and injections of ether and camphor were the remedies tried. The author refers to the therapeutic results obtained with bromoform in the treatment of convulsive cough at the polyclinic of Monaco, where about a thousand cases were treated, and all with most favorable results. He recommends the admixture in order to avoid all danger of poisoning of a nuxia with alcohol and glycerin.

Original Communications.

A FEW INTERESTING PSYCHO-NEUROSES.*

By B. C. LOVELAND, M.D.

CASE I.—Mrs. G. L. came under my observation about the first of September; her age was about fifty-five; height, five feet six inches; weight, about one hundred and fifteen pounds; complexion sallow; gait rather stiff, and facial expression worried and anxious. She said her digestion was good, and that she slept fairly well, but complained habitually of extreme tenderness or painfulness in her hands and feet, especially in the plantar and palmar surfaces, this tenderness extending up the extremities toward the body.

On physical examination I could find no objective symptoms; her reflexes were normal; her sensations were also normal, including the sensations of heat and cold. The only thing noticed was the extreme tenderness of the extremities, sometimes described as a burning pain, sometimes as soreness. The position usually taken by the patient was one in which she would sit with her elbows resting on the arms of the chair, or on her sides, the hands supinated, her fingers separated in such



a manner that no finger touched the next. This position was maintained for hours, to prevent anything touching her fingers, for the touch of even a light paper seemed to give her pain or distress. Sometimes, in connection with the variations of tenderness, there was a flushing of the hands, in which they seemed to be slightly swollen or engorged with blood. This condition had existed for eight years, gradually increasing. It had been attributed to various digestive and uterine troubles. A few months previous to my seeing her she had had her ovar-

ies removed with the expectation of relief, but no relief was experienced.

Under my observation her general nutrition improved, but no material difference occurred in the feeling in her hands. After six weeks or two months the trouble was slightly better, but not sufficiently so to make any positive prognosis as to a radical cure. My opinion as to the cause of this condition was that it was an acro-paræsthesia, probably of hysterical origin, due to a prolonged nervous strain attendant upon family troubles. It had not been ascribed to this cause, but she had the constant care of a semi-insane relative, and I found that she was better when under my care, and would grow worse again at home, improving again when she went away.

A photograph, illustrating the position in which she held her hands, is here presented.

CASE II.—Miss L. F. was brought under my observation by a friend who was an old patient of mine, November 9, 1897. She was about sixteen years of age, the daughter of people in moderate circumstances. Her mother had suffered from two attacks of nervous prostration, and had frequent nervous chills and faint spells; her father was a healthy mechanic. The child had always been nervous and irritable, but her temper had entirely changed since her present trouble began, and she had grown docile and patient.

The statement I had of the case was that the girl had had hiccoughs daily and constantly for a year or more. The friend who brought her to me, a clergyman, told me, when she was shown to a room in the sanitarium, that he thought she would not be able to remain in the house and would have to take a room outside, because her attacks had been so noisy and protracted that they had disturbed the neighbors at home, and he did not think she could be kept in the sanitarium.

On first seeing the patient the opinion was formed, of course, tentatively, that the trouble was of hysterical origin, but no statement was made to the patient or to her mother until a careful examination had been made, when it was found that there was a habit chorea, as it might be called, affecting the diaphragm and abdominal muscles, an abdominal clonus, which was almost constant during waking hours, producing a sort of abdominal churning. This was present even when there was no hiccoughing, as it was called. The result of this somewhat strange diaphragmatic contraction was the ordinary churning motion which accompanied the hiccoughing, and which amounted, when an excessive spell occurred, to a barking almost as loud and violent as the barking of a dog; and it was these barking spells, rather than true hiccoughing, which had been the painful difficulty during the year and had annoyed the neighbors.

The treatment in the case was almost entirely moral; in other words, but little attention was given to the slightly sluggish liver, but a few baths and other treatments were given to occupy the patient's time and attention. It was stated that the condition was a purely hysterical one and subject to volitional control. The patient was instructed to control the first feeling of abdominal contraction and to divert herself every possible moment, and she was very strongly urged to this direction.

The second day she came to my office and reported that she had had five individual hiccoughs and no more; the third day, two or three; the fourth day, only one, and thereafter, until she left my observation about four weeks later, had no kind of hiccoughing.

* Written for the January meeting of Ontario County Medical Society.

A patient came to me recently from the same town who told me that she continued fairly well, but had occasional lapses, which I do not think is strange, considering that she has to live with her mother, whose nervous temperament was largely the cause of her trouble in the first place.

CASE III.—Mrs. F. W., a widow, about fifty-five years of age, whose husband had been dead about two months, came under my observation in January, 1897. She had suffered from nervous trouble more or less for four or five years; had had no children; had no organic trouble; no polypic trouble. She had been accustomed to use stimulants more or less to ward off what she thought were heart attacks, and when brought to me by her sister the object was largely to keep her from the habit of using stimulants.

The heart attacks of which she spoke were subjective entirely, and consisted of what she thought was a stopping of the heart's action, but, by observation of the pulse, we found that it did not differ much from the normal. The attacks were likely to come on almost any time, night or day, and when they did come on, they were ushered in by a feeling of choking in her throat, as if she were suffocating, and she would emit a sharp, quick, barking sound.

Simultaneously with the barking sound she would strike her chest with her left hand violently, pounding her chest, and this would be kept up so long and so loudly as to annoy the neighbors. This was the character of the attacks for which she had been accustomed to take stimulants, and the necessity for these stimulants arose very frequently. Hoffman's anodyne and valerianate of ammonia answered the purpose quite as well, but were not liked as well by the patient, so that soon after the change in remedies, and after a strong moral impression was made, the attacks subsided, and before she left they seemed to be quite subdued.

To try to explain these nervous phenomena in detail would involve an attempt to explain the psychology of the hysterical mind, which would be too deep and extensive a study for the present purpose. It is sufficient to say here that in these cases the trouble belonged entirely to the subjective realm, and when the idea was eliminated and others of a more useful character took its place the distressing symptoms subsided.

PAPILLOMA OF THE NASAL CAVITY:

A BRIEF REVIEW, WITH REPORT OF CASE.

By RICHMOND MCKINNEY, M. D.

MINNAPOLIS.

THE comparative rarity with which papillomata of the nasal cavity are found, in comparison with the occurrence of similar growth in other portions of the body, the larynx, for instance, renders them of sufficient interest to justify the reporting of every case encountered.

In reviewing the literature of the past fifteen or twenty years, one is struck by the apparent uncommonness of this condition. Indeed, when such an astute observer as Bosworth states (1) that in more than two hundred cases of benign tumors of the nose but one

of them was a papilloma, and an eminent English observer, Watson Williams, of Bristol, reports (2) having seen but two cases of nasal papillomata in his entire experience, we become more fully cognizant of the infrequency of the occurrence of this growth in the nasal cavity.

But while the majority of observers have been enabled to report only one or at most two cases of nasal papillomata, Hopmann (3) found in a total of four hundred and thirty cases of benign nasal tumors, seventy-eight of papilloma. At a later period Hopmann also states (4) that in one hundred and eighty-two cases of nasal polypus Schaeffer observed twenty instances of papillomata. This large percentage is somewhat offset by the report of Schmiegelow (5) who, in seventeen



FIG. 1.—Camera lucida drawing of a section of nasal papilloma.

cases of nasal tumors, found only one case of papilloma, while Zuckerkandl (6), in thirty-nine cases of polypi, also found but one case of papilloma.

Of the observations of Hopmann and Schaeffer, that excellent clinician, Bosworth, says (7) that he thinks it is not easy to harmonize them with ordinary clinical experience unless we recognize the fact that these growths are in the large majority of instances overlooked.

Further cases of nasal papillomata have been added to the literature of the subject by Mackenzie (8), Butlin (9), Aysguier (10), Verneuil (11), Cozzolino (12), Gamperz (13), Noquet (14), Baber (15), Wright (16), A. L. Turner (17). Bosworth (18) also calls attention to the fact that the case of follicular tumor of the nose reported by Ward (19), and the one called a condylomatous polyp of the nasal fossa, reported by Testelin (20), were in all probability instances of this disease. Douglass (21) has added the most recent case to those already reported. That in my search through rhinological literature I have overlooked reported cases there is every reason to believe, and that others have observed instances of the occurrence of nasal papillomata without reporting them, must, of course, be taken into consideration, but I have here made as complete records as circumstances would permit.

Hopmann differentiated nasal papillomata into two

varieties—the hard and soft—this classification being seemingly due to the character of the epithelial covering of the growth, those growths which appear near the margin of the nostril usually partaking of the hard variety, having a squamous epithelial covering, and only rarely attaining large size, while those which occur farther back and higher up in the nasal cavity, being covered with columnar epithelium, were said to be softer in consistence and to grow much larger. But the more recent investigations of Dr. Jonathan Wright (22) completely repudiated this classification of Hopmann, it being clearly shown by Wright that Hopmann had, as one of his varieties, described the ordinary polyp formation which had, from pressure, taken on a false papillomatous appearance. Dr. Wright's investigations have been confirmed by later observers, and only recently Dr. Benjamin Douglass, of New York, in reporting a case of papilloma of the nasal septum, cited above, clearly explains the difference in the microscopical structure of a papillary fibroma and a Hopmann polyp. We thus, then, as Dr. Wright states, are unable to say how many cases of true nasal papillomata have been observed. This later light upon the nature of the growths described by Hopmann would lead us, however, to infer that a large percentage of the cases of nasal papillomata reported by this writer as occurring in his own experience and that of others were not instances of true papilloma; thus emphasizing the rarity of the occurrence of these growths in the nasal cavity.

The general appearance of a nasal papilloma is that of a warty growth, being of a grayish pink or red color



FIG. 2.—Magnified sixty diameters.

and lobulated, the surface being irregular and coated to that of a raspberry. Nasal papillomata may also grow from the lower turbinal or septum and may be found ranging in size from that of a pea to that of a filbert, and may be either single or multiple.

In the treatment of these growths but one course is to be pursued—remove with the cold snare and cauterize the base with either the electric or chemic cautery.

My case is presented in a very few words:

W. B. M., aged twenty-four years, medical student, had noticed something which felt like a crust of mucus in the left naris on the upper and anterior portion of the septum for about six months. No discomfort was experienced other than some stenosis, which was not relieved by an attempt to clear the nose. He has had



FIG. 3.—Magnified three hundred and fifty diameters.

occasional slight hemorrhages from this naris. Examination revealed a growth about the size of a coffee bean attached to the upper and anterior portion of the cartilaginous septum behind the tubercle. The growth had a warty, mammillated, raspberry-like appearance, and was of a pale pinkish color. From its consistence and general characteristics I was led to believe it to be a true papilloma. After examining it, I removed it with the cold snare and cauterized the base with the electrocautery. Six months later this growth had not returned.

The accompanying photomicrographs show conclusively that mine is a case of true papillary fibroma, but in further testimony thereof, through the courtesy of Dr. William Keen, a pathologist at the city of Dr. Jonathan Wright, of Brooklyn, and Dr. Benjamin Douglass, of New York, I am enabled to append the following reports as to the microscopical character of the growth.

The histological examination of the growth you sent me shows it to be a fibrous papilloma. Please find the full specimen.

Yours very truly,
[Copy] Wm. Keen, M.D.

Your favor of Feb. 21st, with the growth attached, I should think the growth from which you sent me to be a fibroma papillare or true papilloma.

Thanking you for bringing this case before my attention, I remain,
[Copy] Very truly yours,
Jesse Max Weinert

The specimen you sent for examination is clearly a true "papillary fibroma" or papilloma and not a Hop-

mann polyp. It presents all the necessary qualifications to class under the genuine head. May I thank you for sending it to me for examination? Sincerely,

[Copy.] BEAMAN DOUGLASS.

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CONTINENTAL BUILDING.

THE WEIGHT IN THE FIRST TWO YEARS OF LIFE, WITH A DESCRIPTION OF A NEW WEIGHT CHART.*

By J. P. CROZER GRIFFITH, M.D.,

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THE importance of accuracy of standards in all branches of science is well illustrated in its application to the normal weights and rates of increase of weight of infants at different ages. Yet the difficulties encountered in determining standards in this connection can be realized after a glance at the considerable number of tables and weight curves which have been constructed and at the variation which exists among them. As a matter of fact, from the very nature of things, there can be no hard-and-fast rule according to which children must grow. The normal variation in weight of different newborn infants necessitates either a persistent difference in the weight line as time passes, or a greater rate of increase in those who start behind in order that the lines may finally become one. There are, besides, many difficulties attending the calculation of the normal weight of any infant. For instance, the weight im-

mediately after feeding is, of course, greater than that just before. Then, too, weight is sure to vary, depending upon the amount of food taken, the emptying of the bladder and bowels, the amount of exercise or of perspiration, and even on the ordinary metabolic changes going on during sleep. Thus, it has been found that the infant's weight on being put to bed at night is distinctly greater than when it is taken up in the morning.

Yet, in spite of these elements of uncertainty, it is necessary to possess at least an approximate standard with which any infant's weight can be compared, and by which its gain or lack of gain can be measured. Raudnitz* has even gone so far as to formulate an algebraic equation, by means of which the proper weight of an infant of a given age can be calculated—a law of weight analogous to that formulated by Liharzik for length, and, like it, of no great practical value.

Indeed, the formulating of any such rule for practical application seems impossible. The best that can be done is to determine by a larger number of weighings a general average which may be conveniently tabulated or represented graphically in the form of a weight curve.

There are two methods by which such average weights have been sought, called, respectively, the generalizing and the individualizing. In the former a large number of children of the same age are weighed, and the mean weight is calculated. Another large and, probably, different number of children of another age are likewise weighed and the mean weight of these taken; and so on for the different weeks or months of the period of infancy. This is by far the most convenient and sometimes the only practical method. The objection to it emphasized by writers, and very evident, is that its results may be most misleading. For instance, it is easily conceivable that the children of, say, four months of age may happen to be especially well developed. It might thus occur that the average weight of four-months' children, might even seem to be greater than that of children of four months and a half. Of course, the larger the number of apparently healthy children weighed the less the chance of error becomes, but the number must be very large to reduce the possibility to insignificance, and for the results to become serviceable.

How deceptive the generalizing method may be is well shown by the observations of Lorey.† This writer made weighings of five hundred and sixty-five children, two hundred and eighty-six of which were boys and two hundred and seventy-nine girls. In spite of this large number, it is quite evident that the irregularities which his weight curves show (Chart I), especially in the second year, do not represent the actual condition to be expected in the average child. In the combined curve for both sexes for the second year, as deduced from his figures and shown in Chart II, it will be noticed that

* *Prag. med. Wochenschr.*, 1842, Nos. 7 and 8; Cramer, 251.

† *Jahrbuch f. Kinderheilk.*, 1888, xxxii, 339.

* Read before the Philadelphia Pediatric Society.

children at twenty-one months weigh less than they do at twenty months, and again less at twenty-four than they do at twenty-three months. This certainly does not represent the true state of the case. Lorey makes no claim that his figures yield any statistical results, although based on so many cases.

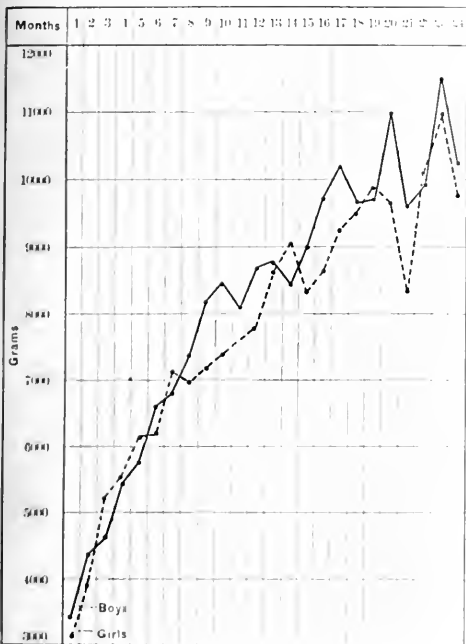


CHART I.

For the most exact study of the rates of growth the individualizing method is better, and is the one that has oftenest been selected by recent writers. This consists in the keeping of a record of the weighings of an individual child, made at regular, frequent intervals throughout its life as an infant, and in the comparing this with a large number of similar records of individual cases. In this way the mean weights, and especially the mean rates of increase for different periods, can be readily computed, and better results obtained with a very much smaller number of cases.

It has been of interest to me to compare the various tabulated observations which have been made, in an effort to determine in this way the weight curve which best represents the growth of the child during the first two years of life. Perhaps the oldest and one of the most quoted tables of growth is that of Quetelet, which is more ideal than actual, and, as plotted by Bouchaud,* gives a straight line rather than the curve which represents the actual condition of affairs. Lorey has

stood (see Chart II). The straight line results from the assumption that the rate of growth is the same for all periods of the first year.

A second much-quoted estimation is that of Bouchaud.* Although his observations were made by the individualizing method, Bouchaud has rounded off his figures to such an extent that his final table of growth is much too schematic. The plotted curve is, however (Chart II), a more accurate representation than that of Quetelet, although it gives a rate of growth lower than may be expected of the average healthy breast-fed infant.

A table of weight constructed by Fleischmann† by the individualizing method applied to fifteen breast-fed children is often referred to. I have plotted the curve derived from these figures in Chart II. It shows well the rapidity of growth of the first months, and the diminishing rate during the succeeding months.

Recently a useful curve has been published by Holt,‡ constructed apparently by the individualizing plan (Chart II).

One of the most careful studies of the subject is that of Camerer.§ This observer has followed by the individualizing method the rate of growth of a large num-

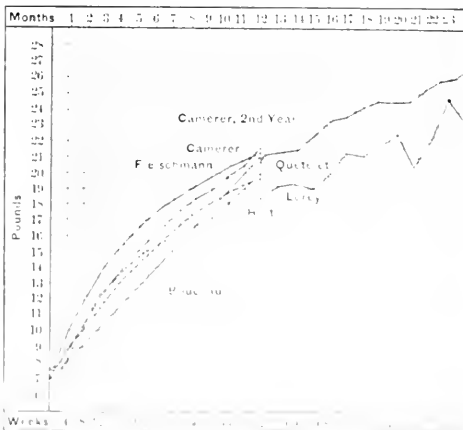


CHART II.

ber of children during the first year of life, and compares the similar observations of Fleischmann, Lorey, and others, and has plotted the curve which, on the whole, most nearly represents the actual condition of affairs. Attention is called to the fact that the initial weight and age of the children are not the same, and that the curves represent the average weights, and are not the actual weights of any one child. The curves are based on human milk or cow's milk, and are not intended to represent the growth of children who have been fed on other food.

* *Revue de Pédiatrie*, 1897, p. 100.
 † *Archiv für Kinderheilkunde*, 1897, p. 100.
 ‡ *Archiv für Kinderheilkunde*, 1897, p. 100.
 § *Archiv für Kinderheilkunde*, 1897, p. 100.

being taken as types—for which, indeed, they are not intended. In Chart II I have plotted the curve of his figures for breast-fed children with an initial weight of over twenty-seven hundred and fifty grammes (six pounds one ounce). Camerer also gives some estimations of the rate of growth during the second year (see Chart III). Another observation upon growth in the second year is that of Lorey, already referred to. In Chart II I have combined his curves for boys and girls respectively during the second year, thus eliminating some of the irregularities.

In all the curves represented in Chart II all figures originally in the metric system have been reduced to avoirdupois weight, for convenience of comparison.

I wish to exhibit a weight chart which I have constructed (Chart V) in the effort to represent as nearly as possible the average rate of growth of healthy breast-fed children. Although to a certain extent schematic, as any averaging chart of this nature must necessarily be, it is, I think, as accurate as can be expected of any one suitable for practical purposes. It has been made after a careful study of most of the available published data, although it follows Camerer's curve more nearly than any other. The fact that it is so often necessary to record the weight of poorly developed children during the second year necessitated the representing in this chart of the continuous growth for the first two years of life. The line passing obliquely through it represents, of course, the rate of growth of healthy breast-fed children. Bottle-fed babies, as a class, fall below this

tal line represents a difference of four ounces. A gain of two ounces or even less can be indicated by marking between the lines. The weight should be taken weekly and recorded by dots connected by a line, as in a tem-

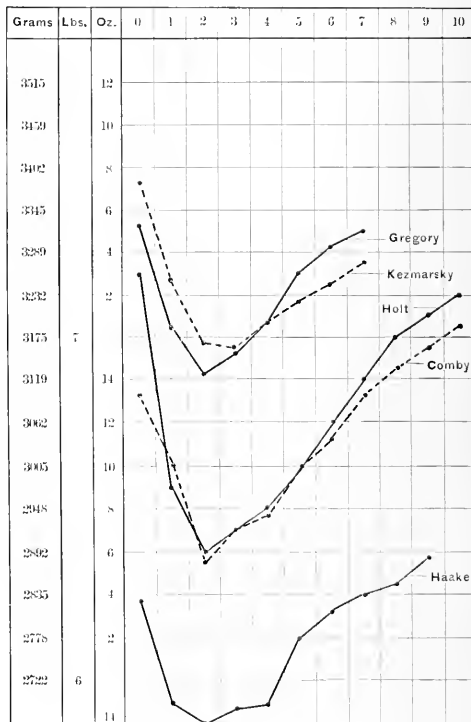


CHART IV.—Weight in the first ten days.

perature chart. For convenience, the figures at the top show not only the weeks but the months as well. In order to prevent the chart from becoming of an unmanageable size the portion for the second year—since this will be needed less frequently—has been narrowed in such a way that the space for four weeks is of the same breadth as that for two weeks during the first year. This necessarily distorts the proper position of the plotted curve, and gives the erroneous impression to the eye that the child grows as rapidly during the second year as during the first. It is evident that if the spaces for the years were of equal breadth the curve in the second year would be very much nearer a horizontal line. For practical purposes this distortion of the curve is of no moment, since its actual relation to the figures is unaltered. These charts in blocks of twenty-five may be obtained from the publisher, Mr. W. B. Saunders, of Philadelphia.

weight, still no mean necessarily so. There is also found a difference in weight depending upon sex, boys being heavier than girls. This difference may, however, be ignored in the connection. Each horizon-

There are a few matters remaining to which brief reference must still be made: First, the birth weight assumed, seven pounds and three quarters, is somewhat

INFANT'S WEIGHT CHART.

Illustrated by J. P. Crozer Griffith, M. D.,
Clinical Professor of Diseases of Children in
the University of Pennsylvania.

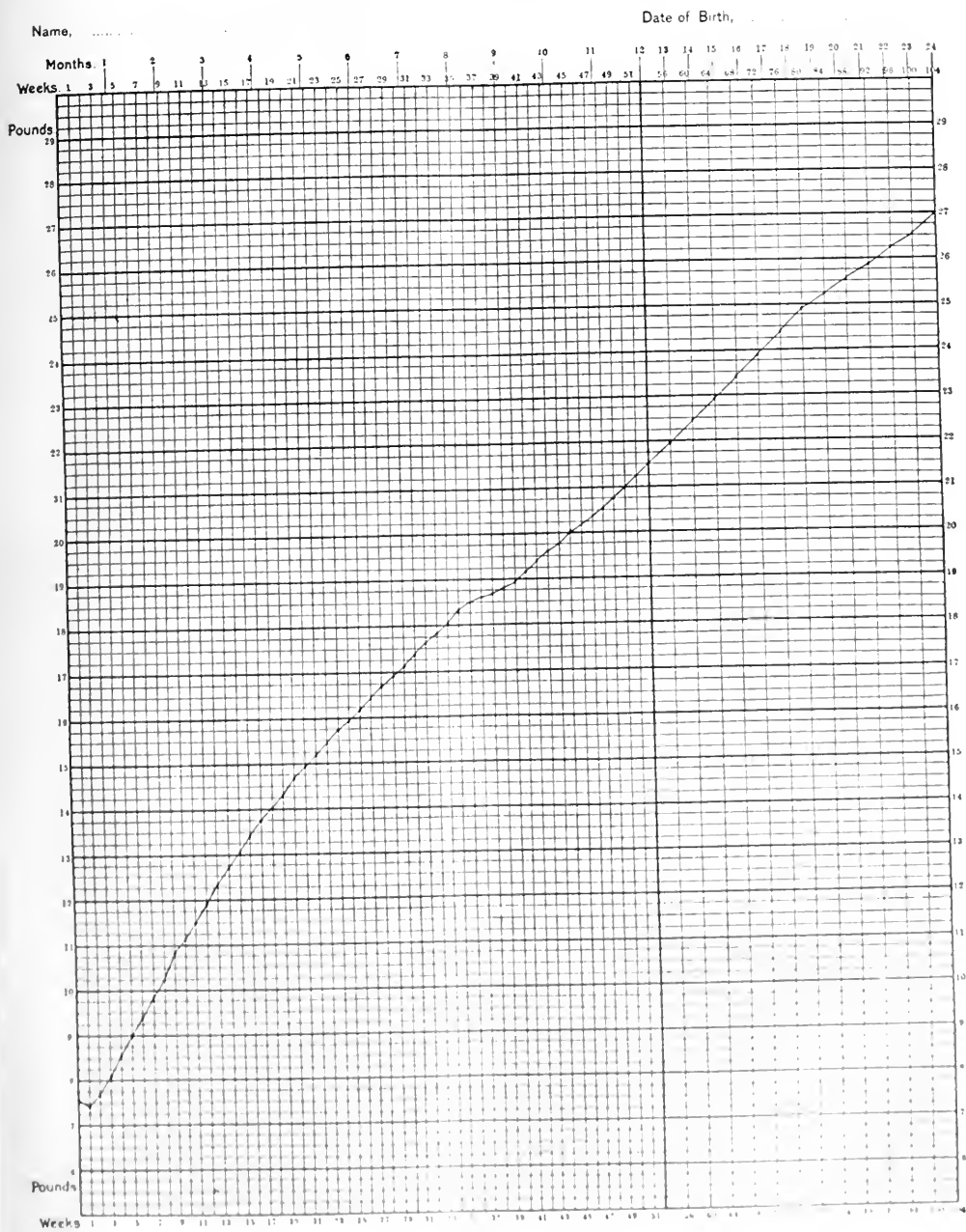


CHART A

more than that given by many writers. Yet it agrees practically with the statistics of Fleischmann, as also with those of Camerer for many of his cases. Should a child at birth weigh much less than this it is to be expected that the rate of growth will be very much the same. This will give a curve slightly below that of the chart. But a child which weighs over seven pounds at birth may be expected to reach the full normal weight by the age of one year.

Then, as to the loss of weight which the child suffers after birth before its regular gain begins. Although this does not necessarily take place, yet its occurrence is the rule and may be considered physiological. This was shown by the interesting experiments of Ingersley,* who allowed sixteen children immediately after birth to be suckled regularly by women who had been confined a few days before. The remarkable fact was noticed that the children showed not only a greater but a more prolonged loss of weight than the average.

There have been various estimations made of the degree and duration of loss. Some of these I have depicted in Chart IV, including the observations of Gregory,† Kezmar-ky,‡ Holt,§ Comby,|| and Haake.^A In all cases statistics in the metric system, or, as in the case of Haake, in the old German system of weights, have been changed into pounds and ounces avoirdupois. The curves of Gregory and Kezmar-ky, it will be noticed, run much together. The first was based upon observations made on thirty-three and the second on thirty-two healthy, breast-fed children. Kezmar-ky explains the greater duration of loss in his cases and the slower gain, as compared with Gregory's, on the ground that the children under his care were not nursed with the regularity which was desirable. In Gregory's they have nearly regained the normal weight by the seventh day; Kezmar-ky's fall much short of this. These two curves are largely in accord with the observations of Winckel,¶ and seem to represent the experience of most investigators. The curve representing the table of Comby seems to be largely schematic. I can not find on what actual observations it is based. The curve of Holt represents his experience with a hundred healthy, breast-fed children. It differs from the others in the greater degree of loss of weight, which equals ten ounces (two hundred and eighty-four grammes). This, however, is in accord with the observations of Townsend‡ on the records of two hundred and thirty-one breast-fed children in the Boston Lying-in Hospital. Here the average loss was two hundred and

seventy-nine grammes (9.8 ounces). I presume, however, that children suffering from illnesses were not excluded in making the computation. The observations of Haake on a hundred healthy, breast-fed children, as shown in the curve, not only give a loss which is less than that usually accepted as the common one, being but a hundred and sixty-three grammes (5.75 ounces), but also an initial weight lower than the average.

According to Fleischmann, who has made a careful study of various writers' estimations, the average total loss equals two hundred and twenty-two grammes (7.8 ounces). The duration of loss is two or three days, and sometimes longer. The total loss equals about one fourteenth or one fifteenth of the initial body weight. Increase in weight begins on the second to the fourth day, but the original weight is seldom regained before the eighth or ninth day or even not before the tenth day. The chart I have designed (Chart V) shows the approximate loss existing at the end of the first week, but not the greater loss which had taken place before this date.

Lastly, the variation in the weight curve of any infant which a weight chart will show, must be borne in mind. Not only will there be a variation dependent upon the fullness of the stomach, bladder, and bowels, as already stated, but there is a variation which does not rest upon these factors and yet which can not be called pathological. For instance, it not infrequently happens that a baby goes, it may be, a week without a gain in weight, or even shows a loss, and yet can not be called ill. Yet such a condition always, of course, should arouse watchfulness.

The value of the systematic recording of an infant's weight scarcely needs to be emphasized. Every physician especially interested in diseases of children fully recognizes it, for he knows that often a failure to gain, even before the child shows to the eye any ailment whatever, may be the sign that some form of illness is present or that the child is underfed. The weight chart is even more valuable than the temperature chart in the case of infants. The weighing, too, is such a simple matter that there is no excuse for a failure to have it carried out by the mother, at least once a week, and where a change in the method of feeding is being made, twice a week. Good spring scales showing ounces are not expensive, or a steady and ordinary kitchen scales with weights will answer. But best are some of the standing spring scales fitted with an oblong basket or a scoop, and which shall be devoted solely to the weighing of the baby. In my office are small platform scales with a specially large scoop which weigh from half an ounce to fifty pounds, and which I find indispensable.

It is, of course, understood that the weight recorded is that of the child undressed. If undressing at every weighing is inconvenient, the child may be weighed when dressed and then when undressed, and the weight of the clothes deducted. At subsequent weighings, then,

* *Nord. med. Aek.*, 1875, vii, No. 1.

† *Archiv f. Gynakol.*, 1871, ii, 18.

‡ *Reid.*, 1874, x, 547.

§ *Transactions of the A.S.*

|| *Les Travaux de l'Académie de Médecine*, 1, 9.

¶ *Monat. f. d. Geburtk.*, 1862, xix, 339.

‡ *Reid.*, 1876.

1 *Boston Medical and Surgical Journal*, February 17, 1887, p. 157.

it is only necessary to see that the clothing is exactly similar, and undressing will not be required.

EMPYEMA:

INCISION AND DRAINAGE SUCCESSFUL IN TWO CASES OF
VERY LONG STANDING,
WITH PERFORATION OF THE LUNG AND OF THE
THORACIC WALL.

By SINCLAIR TOUSEY, A. M., M. D.,

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SURGEON IN CHIEF, ST. BARTHOLOMEW'S CLINIC.

In each of these cases, cited from private practice, the amount of fluid was large, the lung had been compressed for a long period of time, and under expectant treatment perforation of the lung and of the thoracic wall, with the formation of a subcutaneous abscess, had taken place before the services of a surgeon were sought. They will be seen to have been severe cases and to have been successfully treated by simple incision and drainage, but they are not offered as an argument against resection of the ribs in the operative treatment of empyema. The author employs both operations, and offers these two cases for consideration in making choice of the operation to be performed:

The first patient, J. C., a boy of fourteen, was a delicate little fellow with kyphosis in the dorsal region. Following the *grippe* he had had pain in the left side of the chest for four months before I was called in to take charge of the case. Finally, a large subcutaneous abscess had appeared at about the level of the ninth rib, with the point of greatest redness and fluctuation in the ninth left intercostal space about three inches from the line of the spinous processes. He had had chills and fever of a remittent type.

On examination I found flatness over nearly the entire left side of the chest, and a fluctuating swelling in the situation already described. The diagnosis was empyema with perforation of the thoracic wall. Drainage was imperatively demanded, but the decision as to resection of one or more of the ribs was left to be made at the time of operation.

Under ether and with full antiseptic precautions a straight incision was made in the ninth left intercostal space over the area of greatest swelling and fluctuation. A pint or two of creamy pus was evacuated and the finger was introduced to explore the cavity. This was found to be the pleural cavity, and the lung to be considerably compressed. The intercostal space was wide enough to admit of the introduction of a large rubber drainage tube four inches long, and no resection was done. The cavity was not irrigated at the time of operation, and an absorbent antiseptic dressing was applied.

The discharge was very abundant for a time. For the operation, and the cavity was irrigated with Thiersch's borosaccharine solution every other day for three weeks. At the end of this time the lung had considerably expanded, and the cavity into which the tube sinus led had become very small. The tube was shortened so as to just pass through the thickness of the chest wall, but the discharge continued at the rate of a tablespoonful a day for six months. There then remained little more than a tube sinus, and the was

injected with a ten-per-cent. solution of permanganate of potassium. There was an immediate fit of coughing, with expectoration of mucus deeply stained with the permanganate. The same symptoms followed the injection for a few times and then ceased. The tube was now left out, and the sinus was injected twice a week with the same solution. It finally closed about six months after the operation. At intervals of several months for the next year the sinus would reopen and discharge a drop or two of serum. No diseased bone could be felt, and the pleural cavity never refilled. The discharge then came to an end, and the side has now been perfectly healed for several years.

The second patient, S. A., a boy of nine, had pneumonia during January, 1897. He made a good recovery, but had a relapse after going out of doors. Recovery from this was slow, and finally was interrupted by the appearance of unmistakable symptoms of empyema.

The family reside in a little village in New York State, and their physician called in a consultant from the nearest city. They decided to employ expectant treatment, poultices and measures for sustaining the strength of the patient. After the empyema had been present for about three months, an abscess pointed in the fourth left intercostal space an inch to the right of the nipple line. A half-inch incision was made through the skin and a rubber tube introduced into this superficial cavity. The tube slipped out on the following day and was not replaced.

When I first saw the boy on July 24, 1897, pus was still oozing from this puncture, and yards of sheeting were used every day in absorbent pads. There was flatness over the entire left side of the chest; voice and breathing were absent there, and the apex beat could be felt close to the median line. There had been for four months an evening temperature of 102.5° F., and there was constant and profuse purulent expectoration. Several yards of muslin were used every day as little handkerchiefs for the expectoration, and were burned after use. As was to be expected, there was an extreme degree of emaciation and an almost waxy transparency to the flesh. Besides the puncture from which pus was oozing, another abscess, with gaseous crepitus, was forming in the second left intercostal space in about the same vertical line. My diagnosis was a large accumulation of pus in the left pleural cavity, forcing only an overflow, not drainage, through the sinuous opening present. I arrived there in the evening, and, after making an examination, was driven miles through the country to see the family physician, who had not been told just when I would come up from New York. It was raining and absolutely dark, but we finally got to the doctor's house and called him up. We found that he had been waiting for me as to the necessity of operative interference, and he promised to assist me on the following day.

The boy's condition being altogether too weak to allow of the use of a general anesthetic, the following plan of Maendel's solution of nitrochloroform was adopted. Hypodermically, the skin was chloroformed, ether, and local anesthetic was produced by rubbing with ethyl chloride. An incision was made in the fourth intercostal space near the median line, and, after about three parts of empyema were evacuated, the finger introduced into the pleural cavity, and the incision was made to be near the bottom of the cavity, and the lung to be out of reach, so much as to be out of the way. Two good sized fenestrated rubber tubes were inserted, which had been made self-sealing by sitting in the

internal ends and spreading them out by a stitch or two taken in the rubber. An absorbent antiseptic dressing was applied, no irrigation having been employed.

After the operation the temperature varied between 98° and 99° F.; cough and expectoration ceased at once and entirely. There was a rapid gain in weight and strength. On September 13th the patient weighed sixty-one pounds, only seven pounds below his weight before this illness; the apex beat was in the normal site, and the left lung was being used to some extent. The tubes were left in place and nitrate of silver applied to the exuberant granulations about the orifice. On October 2d one tube was left out and the other about a month later. In this case the pleural cavity had never been irrigated at all. The tube sinus was now syringed daily with a ten-per-cent. solution of permanganate of potassium; it closed completely and permanently about December 1st. Since that time he has been in splendid health, and now no perceptible difference exists between the two sides of the chest.

In each of these cases surgery had not been resorted to until there had been perforation of the chest wall with pointing underneath the skin, and there were also unmistakable evidences of perforation of the lung. In the one case this was shown by profuse purulent expectoration, which ceased absolutely the moment drainage was established, and also by gaseous crepitus. In the other case permanganate of potassium appeared in large amount in the sputum when the tube sinus was injected with that drug. They were both cases where effective drainage could be secured without resection, and both made complete recoveries in an average length of time.

151 WEST SEVENTY-SIXTH STREET.

ON MORPHINISM.

By LOUISE G. ROBINOVITCH, B. L., B. S., M. D.

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MEDICAL literature is replete with treatises on the remedial management of morphinism and the allied ailments; yet their origin, their pathology, should be deemed quite as worthy of investigation.

Is a subject addicted to the morphine habit in possession of the normal mental equilibrium, and, if not, how does this equilibrium differ from the normal?

In the large class of hereditary degenerates the clinician is confronted with a most astonishing variety of mental manifestations. They perform acts of which they are either ashamed, or which they subsequently deplore; and yet, in both cases, they find it impossible to govern or re-train their inclinations.

"*C'est plus fort que moi*" is an expression which gives the correct description of such patients' condition under these circumstances. They struggle against their inborn desires with all the strength of will they possess, but generally fail to conquer their inclinations.

I have a patient under observation who, coming

from a highly nervous and insane family, suffers from a most peculiar impulse, which prompts him to grasp any inanimate object and to squeeze it until he exhausts himself; he then loosens his grip. He is subject to a series of other as remarkable obsessions and impulses, but this one developed to such a degree that he became incapacitated for his work and had himself committed to the Sainte-Anne Asylum. He has an appetite, so to speak, for catching hold of objects and squeezing them. He is perfectly lucid; understands that he must not give way to his impulse; but when under its influence his will power is reduced to the point of non-existence. At first, this impulse came only at rare intervals, but in 1897 it had become almost constant; no sooner did he loosen his hold upon one object than he would grasp some other, such as a chair, a table, a projection of the wall, a door knob, his mother's skirts, a penholder, etc.

Another patient under my observation at the Sainte-Anne Asylum is subject to an impulse which prompts her to kill her two younger children, the eldest one having absolutely no influence upon her. Yet she actually loves all three of them equally; she mourns her fate; she would do anything in her power to rid herself of that impulse, as she is a most devoted mother and wife. She, too, is perfectly lucid mentally, having neither delusions, hallucinations, illusions, nor delusional interpretations.

Such patients, belonging to the class of hereditary degenerates, are not different, as a class, from the morphinomaniacs. The latter class, as it is understood by M. Magnan, is rather rare. The morphinomaniac is a patient who eats morphine by force of impulse, just as both of the above-cited cases perform their acts through the influence of irresistible impulse. The morphinomaniac is like the dipsomaniac, who drinks alcohol because of the promptings of impulse, although he tries his best to resist it. A dipsomaniac in M. Magnan's service at the Sainte-Anne was so grieved because of her affliction that she put fecal matter into the alcohol so that the consequent disgust might prevent her consuming the draught, but even this heroic measure failed completely. When the impulse came, she swallowed the mixture and satisfied her craving.

The morphine eater differs from the morphinomaniac just as the chronic alcoholic differs from the dipsomaniac. Both the morphinomaniac and the dipsomaniac absorb their respective drugs by impulse, while the chronic alcoholic and the morphine eater indulge their craving because of lack of resistive will power, the difference between the two lying entirely in the form. Clinically, however, both belong to the class of mental degenerates.

We are not prepared to localize the cerebral lesion which causes the disease, as one could localize it in a right or left hemiplegia, but the lesion exists, nevertheless. Whether the appetite is too exaggerated, the will too weakened, or whether there is simply a general

solution of continuity in the connecting fibres which, by their communicating agency, maintain the psychic harmony, there certainly is a material cerebral defect.

Morphinomania or morphine eater, the subject generally presents quite a clinical tableau, indicative of mental degeneracy, of which the most prominent feature is only one symptom.

The following case serves to sustain this position regarding the status of the morphine eater:

Mlle. Anite C., modiste, thirty-four years old, entered the Sainte-Anne on the 12th of April, 1897.

She is a natural child. Her father died of an apoplectic attack; her mother had numerous nervous spells; she was irritable and unruly, and inflicted bodily punishment upon her children to an unusual extent; she also drank to excess. She was the mother of nineteen children, the greater number of whom died during infancy, or were stillborn. Five children are now living, of whom, besides the patient, there is one sister who is extremely nervous, irritable, and who, like the patient, also has the morphine habit.

From the age of twelve the patient has been of a melancholy turn of mind, and once, while under the unkind treatment of her mother, she attempted to commit suicide by swallowing an infusion made from matches. At the age of thirteen she had typhoid fever in a severe form. At fifteen she, for the first time, had an attack of hysteria, which was preceded by an aura with hallucinations. Flames flashed before her eyes, and then came a convulsive attack; but she did not bite her tongue and there was no foaming at the mouth. These attacks lasted from ten to fifteen minutes. At the age of sixteen she fell in love with a man with whom she lived nineteen months. At the end of this time she found it uninteresting to continue her relations with him and began practising abortions on herself, which soon caused a metrapéritonitis. As a result of this it soon became necessary for her to enter a private sanitarium for treatment. She secured admission to the Dubois Hospital, where she for the first time received hypodermic injections of morphine, and soon became addicted to the drug. Her physician vainly endeavored to suppress the injections; she bought some morphine herself clandestinely, and after her discharge from the sanitarium in 1881 she used twenty centigrammes of morphine, in ten injections, daily.

She came home incompletely cured, still suffering from pelvic pains, to allay which she soon began to take thirty centigrammes of morphine a day. This continued for one year. Naturally, as a result of this system of life, she lost her appetite, slept badly, and suffered almost continually from oppressive nightmares. The malaise in the mornings was relieved by fresh injections of the drug. Menstruation stopped completely, and she soon found herself an absolute slave to the medication. She was forced to gradually increase the dose, until she was giving herself from ten to twenty consecutive injections at one time. She made such concentrated efforts that she had to keep them warm in order to prevent crystallization of the morphine salt. The constant puncturing of the skin soon brought on trophic and alcoholic lesions, for the treatment of which she entered the Necker Hospital in 1887. She left there, however, after a short stay, as she could not endure the progressive diminution of the morphine doses. In 1888 she was treated at various hospitals, notably at the Charité and

the Beaujon. The sudden suppression of the drug in the latter hospital caused overpowering vertigo, vomiting, and syncope. Not possessing sufficient courage to undergo this strict régime, she soon obtained her discharge. In 1885 we again find her, however, entering the Charité. At that time she presented marked amblyopia of the left eye and suffered from a premature falling out of her teeth. After a lapse of a month she obtained her discharge without having improved to any appreciable extent. She was then taking four grammes of morphine in thirty grammes of water, by the mouth. As this had no pleasant effect upon her, causing her, on the contrary, to suffer from headaches and extreme excitement, she again had recourse to the hypodermic injection, taking two grammes and a half of morphine a day. This abuse was followed by a profound cachexia, which forced her again to enter a hospital, the Hôtel-Dieu this time. There she again deceived her physicians, secretly giving herself injections, and upon being discovered was sent away. As her condition was precarious, she committed herself to the Sainte-Anne Asylum on the 16th of February, 1886.

She was very emaciated, weighed only forty-four kilogrammes, and presented hysterical spots and anæsthesia. There was complete loss of appetite, obstinate constipation, a bleeding gingivitis, and looseness of the teeth, due to a general alveolar periostitis. Sleep was absolutely impossible.

The method of gradual diminution was employed, and the patient apparently stood it very well, until it was learned the she received morphine carefully packed in spoils of silk, or in the candy which was brought her from outside.

The morphine was then suspended abruptly on March 25th; she became much excited, had incredible vomiting, diarrhoea, and alarming symptoms of collapse. A few days later, however, she began to feel better, her appetite returned, and she even increased in weight. This improvement became so marked that menstruation, which had ceased entirely during the previous six years, reappeared.

The patient left the asylum on the 1st of June, 1886, in good condition, the amblyopia having completely disappeared. But on her return home she found herself near her sister, who was also suffering from morphinism. The patient, under the influence of the surroundings, again picked up her morphine habit, taking injections of two grammes a day.

In 1887 she was treated at the Salpêtrière. In 1888 she entered Laenec, where she administered to herself clandestine injections and, upon this being discovered, was summarily discharged. On the 9th of January, 1888, she entered the Sainte Anne.

She presented then hallucinations of a most terrifying nature; she was persecuted by ferocious blood animals, etc.; she slept badly, had numerous nervous spells, and exhibited suicidal tendencies. These were caused by her despair of recovery from her long time habit. Her memory was much impaired, and she was in reference to recent events. Her general condition, however, fearful, her genital pharynx was much inflamed, and her heart was in a state of exhaustion; but it was necessary to suppress the morphine gradually. She was given coffee and spirituous drinks, and was enabled to enable her to sleep. From the 1st of March to the 15th of January she exhibited alarming symptoms of morphinism, namely, vomiting and epistaxis, etc. On the 15th, however, she had completely recovered, and her physician

was astonished. On the same day she was discovered giving herself an injection of morphine. She had hidden a syringe and a solution of the drug in her bustle.

"I have tried," she said, "every possible means to get along without the morphine, but it was impossible."

She left the asylum on April 22, 1888, in good physical condition, but returned on the 15th of October of the same year and was discharged on the 22d, only to return on the 26th of December. She left on the 5th of February, 1889, but again suffered from indulgence in the drug, and the following are the dates of subsequent admissions and discharges to Sainte-Anne:

Entered, October 4, 1889; discharged, October 26, 1889.

Entered, April 1, 1890; discharged, April 19, 1890.

Entered, March 6, 1891; discharged, May 23, 1891.

In 1891 she suffered a severe shock, caused by the death of her brother. He was found drowned.

"When I saw him at the morgue," she said, "I was like an insane woman; I wished to carry his body home; I refused to believe that he was dead; and on the day of his funeral I did nothing but laugh; I wished to sing all the time; it was all involuntary."

This tempestuous grief only served as a new spur to her old habit. She began using larger doses than ever.

"I wish to hear no more about a cure," she said, and, fulfilling her declaration, she kept away from the hospitals until the 26th of January, 1895, when she was forced again to seek admission to the Sainte-Anne Asylum. She suffered from highly depressing nightmares, had visual hallucinations, and saw imaginary people, such as a woman with a black veil, etc. She realized, however, that these visions were purely imaginary. She left the asylum on the 10th of November, 1895.

In speaking of her sufferings from deprivation of the drug, she said:

"This winter I was at death's door; I took almost nothing during six months, and for eight consecutive days I had absolutely nothing."

As soon as she left the asylum she again started her old practice of morphine injections and continued them until April, 1897. As she then fell into a very alarming condition, she began to diminish her doses, taking only twenty centigrammes a day. In conjunction with this, however, she also took five grammes of chloral and twenty grammes of laudanum daily. This caused insomnia and loss of appetite, and she again came to the Sainte-Anne on the 12th of April, 1897.

She then weighed but forty-four kilogrammes and eight hundred grammes. The method of progressive diminution was employed, and the treatment was finished on the 23d of April. She improved rapidly, and in July weighed three kilogrammes more than she did at the time of her admission. She was discharged on the 23d of July, 1897.

Coming from a highly neuropathic and psychopathic family, this patient had manifested from her very earliest age most prominent psychopathic symptoms. She had hysterical attacks, had attempted suicide, and could not accommodate herself to her surrounding circumstances. The appetite for morphine was only one prominent symptom of a disease based upon the deep root of degeneracy which she inherited from her ancestors.

In further illustration of this same class of degenerates, I would cite the following case of cocaineism and morphinism:

Georges B., twenty-six years old, born in Geneva, entered the Sainte-Anne Asylum on the 26th of March, 1897.

The patient's father was a man of high accomplishments, who died of an apoplectic attack. His mother died of heart disease. A grand uncle on the mother's side was somewhat neurasthenic.

The patient, although very intelligent, is singularly lacking in enterprise. During his varied career he exhibited a great lack of stability. In 1886 and 1887 he studied pharmacy; then he determined to change his vocation and began the study of medicine. He undertook the task of acquiring many languages, and as a result of some whim settled upon engineering as his career. He succeeded in becoming a civil engineer, and even obtained a position as such with a railroad company.

In 1889, while in Spain, he contracted syphilis, and subsequently suffered from blennorrhagia. In 1890, while in Malaga, Spain, he suffered considerably from a cystitis, for which his physician gave him a hypodermic injection of morphine. The dose, of from one to two centigrammes a day, was repeated, but had no immediate beneficent effect upon him. On the contrary, he only suffered from nausea and headaches. After a continuous use of the drug for some days, however, the unpleasant effect wore off by degrees, and he began to like its results.

"The more accustomed I became to the use of morphine," he said, "the more pleasant its effects became."

His physician eventually gave him a hypodermic syringe and a prescription for a morphine solution, thus enabling him to administer the injections whenever he felt the need of doing so; beginning with doses of from one to two centigrammes a day, which, as he put it, made him feel as if he were "floating on cotton." So pleasant was this sensation that he soon made the slightest provocation a pretext for administering to himself an injection. He used the drug for ameliorating the effects of the slightest fatigue or a headache, and particularly to "increase his mental activity." He continued these injections until 1893.

One day he had some unpleasant words with the family of his *fiancée*, which quite disturbed him, and upon his arrival home he immediately gave himself an injection of twenty centigrammes of morphine. This was the first large dose he had ever taken. His father died soon after, and the shock of grief was another occasion for the self-administration of a large dose of the drug. This time he gave himself twenty-five centigrammes. In describing the effects of this dose, he said that he felt strong arterial throbbing at the temples, heard singing and ringing in the ears, seemed to see a mist before his eyes, and now and then saw brilliant flashes of light.

In 1893 he lost all interest in his work and decided to try his fortunes in South America. He undertook the voyage, and went without his beloved drug for forty-five days, the time consumed in making the passage across. On his arrival in Chile, however, he found it difficult to make his living, and became considerably oppressed, ate badly and slept poorly. He rarely took the injections now because of his pecuniary difficulties, but on the occasions when he could afford to indulge himself he

gradually increased the dose until, in March, 1894, he found it absolutely necessary to take one gramme and twenty centigrammes a day. Meanwhile, he was gradually failing in health and losing both appetite and weight, as well as becoming more and more depressed.

He then attempted to rid himself of the habit by substituting sparteine, but failed in the attempt. He entered a hospital for treatment, but being unable to stand the method of sudden suppression in vogue there, he obtained his discharge. He then contracted typhoid fever, for which he was treated, during a period of four months, with opium, wine, and morphine. At the expiration of that time he found himself penniless, but managed to scrape together enough to procure morphine, the drug, as he put it, having "in more than one instance encouraged and sustained" him, lending him strength to "struggle against the thought of suicide." In June, 1895, he found himself with absolutely no means of procuring morphine, and while searching in his valise, with the hope of finding some remnants of a former supply, he chanced upon a bottle of cocaine, which he had at one time used upon the advice of a druggist as an antidote to morphine.

He had recourse to this drug "in order to sustain my strength, which was failing rapidly, and to calm my hunger for the morphine." Within the course of twelve hours he took a gramme and a half of Merck's cocaine, without the slightest poisonous effect. "I went out the following morning," he said, "much invigorated, although I had been fasting since the morning before."

Soon after this he became intimate with a druggist, who generously supplied him with both morphine and cocaine. At first he only took fifty centigrammes a day of each drug. In August, 1895, however, he obtained a position as chemist at the municipal laboratory at Valparaiso, where he remained four months. As he continued using both drugs he soon began to experience auditory hallucinations. At night he thought he heard his manager saying to him:

"Ah, ah! here you are, I see you; you are not working; you are giving yourself injections instead of doing your work!"

As he was poorly paid at the laboratory he decided to return to France, and arrived home in September, 1896. Here he stayed with his uncle, who supplied him with morphine and cocaine. "It was only humane," he said, to do this. But the patient was not satisfied with the small doses supplied him by his uncle, and soon started in selling his clothes to procure money with which to purchase the drugs.

Toward March, 1897, he totally lost his appetite and the ability to sleep, and began to exhibit delusions of persecution. He imagined that every one was ridiculing him, and was firmly impressed with the idea of every one's animosity toward him. An increase in the dose of the drug caused his delirium to become more active. On the evening of the 25th of March he imagined that he was pursued by enemies, and cried: "Help, help! Murder!" He ran to police headquarters, begging for protection.

When brought to the *Infirmier du Dépôt* he imagined that in fact were crawling under his skin.

At the *Sainte Anne* his hallucinations ceased after the first day. The method of progressive decrease was employed, and he was discharged cured in July, 1897.

Extracts from the Notes of G. R. "It is a common belief that the use of morphine induces vivid dreams and indescribably pleasant sensations, and that

those produced by the use of opium, as stated in the accounts of opium smokers in the East. . . . I have found that morphine calms, cools, and represses, progressively, any physical desires. It ends, even, by producing temporary sexual impotency. There is, in connection with the latter, a total indifference to the opposite sex, this indifference sometimes becoming an aversion. The male morphine eater never thinks of woman.

"Once the morphine becomes a daily necessity, it is also an irresistible, absolute, and sole passion, excluding any other satisfying agent of the senses, passions, or inclinations. Morphine admits of no rival. It temporarily suppresses all physical as well as moral suffering. It excites the intellectual functions, and causes a feeling of self-satisfaction that surpasses any other pleasant sensation.

"I have endeavored, at different times, to gradually diminish my daily doses, centigramme by centigramme, but I have soon found myself suffering from marked malaise, oppressive anxiety, and neuralgic headaches; my skin became covered with cold perspiration, and I yawned incessantly. I felt unable to move or to do anything whatsoever."

In speaking of the effects of the gramme to gramme and a half of cocaine, which he took daily in connection with his morphine, he says:

"These large doses of cocaine plunged me into a condition of drowsiness, hebetude, and ecstasy of a peculiar nature. I gave myself hundreds of hypodermic punctures, which caused me to lose a considerable amount of blood, for I made intravenous injections. I remained in a condition of stupor, hypnotized by the glittering of the needle and the syringe. Sometimes I even experienced cataleptic attacks, falling asleep in an upright position, both arms uplifted, holding the needle and syringe for hours at a time. Once I remained in such a position for four hours and did not feel the least bit fatigued when I regained consciousness.

"Sometimes I saw small, almost microscopic, animals, which ran back and forth upon my skin, and gave rise to a creepy sensation. My general sensibility became dull; I could not smell as well as usual. But my hearing became more acute than ever, and I at times heard with such intensity that the process became painful; the slightest noise became abhorrent, and I often stopped my work, crying for absolute quietness. I soon began to have hallucinations. The howling of a dog in the yard sounded like the voice of my employer, who seemed to be reproaching me. The cracking noise of a panel or window made me imagine that I was being watched, or was to be interfered with in taking my usual injections."

The high intellectuality of a subject does not exclude the possibility of his being a degenerate. M. Magnan, in his *Recherches sur les centres nerveux*, cites many cases of so-called superior degenerates who, while of a highly intellectual order, nevertheless exhibit most extravagant obsessions and impulses.

A lady of our acquaintance, of a highly cultured mind and nature, a subject to whom I was a pupil's her to chew unground wheat. This did not satisfy her craving; she became morose, restless, and unable to perform her daily task.

"I am not under tired of," she said, "but I am pivo

must chew the grain." She keeps a supply of wheat ready at hand upon her work table and no dictates of conventionality can interfere with her indulgence of her strange appetite. She looks upon it as a slight oddity, but the clinician realizes the importance of the symptom and its underlying fundamental hereditary causes.

The morphine eater's malady differs in no way from this clinical manifestation, except it be in form. There is here, as there, an underlying history of degeneracy, which is characterized by many a clinical feature, the predilection for morphine being the most prominent symptom in the former.

The question naturally arises, Are such patients curable? Certain it is that they improve under close supervision. Where, however, as demonstrated in the first case above quoted, the hereditary influence is quite marked, and the unknown anatomical lesion is, inferentially, pronounced, the instability of the mental equilibrium is such that a permanent recovery is almost not to be hoped for.

I desire to express my cordial thanks to M. Magnan for his courtesy and for permission to study and publish these cases.

THE OUTDOOR TREATMENT OF TUBERCULOSIS IN THE ADIRONDACKS.*

By J. A. WILDER, M. D.,

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PHYSICIANS have for many years noted the beneficial effects of pure fresh air in the treatment of diseases of all types, acute and chronic, especially those affecting the air-passages, and since the gratifying results obtained in this line by Brehmer, founder of the sanatorium at G6rbersdorf, Walther, of Nordrach, Dettweiler, and others in Europe, and Trudeau and Bowditch in this country, a new impetus has been given in the medical world to this method of treatment of pulmonary affections, with the result that at present much more is being done to cure and eradicate tuberculosis than has ever before been accomplished. That no particular climate is necessary for the cure of this disease, although some are undoubtedly superior to others, is now agreed to by all authorities on the subject. That no one climate will prove beneficial to all cases, and that there are some patients who, either on account of feeble resisting power to the disease or the overwhelming virulence of their infection, will eventually succumb to it wherever they may go or however favorable the circumstances under which they are treated, are also self-evident, and that continuous life in pure air, wherever it may be found, is the essential, *par excellence*, so far as climate is concerned, in the treatment of pulmonary tuberculosis, are facts generally conceded by those who have given the

subject much attention. There can be no doubt that great good has been done for patients suffering from this disease by life in some of our western and southern States; but physicians should not overlook the fact that there is quite near at hand a large tract of country where fully as good results have been and are at present obtained in the cure of tuberculosis as in either the West or South, without the necessity of the patient severing home ties to any great extent, and making such a long, tiresome, and expensive trip into a new country. That persons suffering from pulmonary tuberculosis should, if possible, be cured in a climate similar in its characteristics to that in which they intend to spend the remainder of their lives is now a well-recognized fact, and for that reason also it seems to me that the Adirondacks are more suitable for patients whose homes are in the East than places of considerable elevation and very dry atmosphere, unless the patients intend to make such places their permanent homes. A moderate elevation is usually no contraindication to patients having cardiac lesions, functional diseases of the nervous system, or hemorrhagic cases, and a cool, stimulating climate seems to be superior, especially for incipient cases, to the more or less enervating effect of continuous life in a warm climate. That the majority of patients improve more rapidly in the Adirondacks during cold weather than during the summer, due in all probability to this point, can be readily seen by any one making inquiries about the subject, which controverts the traditional idea that cold is to be avoided by consumptives. The Adirondack plateau covers over three million five hundred thousand acres, the greater part of which is densely wooded with evergreens, besides a great variety of deciduous trees, and has an average elevation of about two thousand feet above sea level. The soil consists almost entirely of fine quartz sand through which all moisture leaches very rapidly, the underlying formation consisting chiefly of the igneous rocks. A great number of villages and small settlements are found scattered all through this part of the country, many of which are very seldom heard of in the outside world, and many others that are still used only as pleasure resorts. On account of my acquaintance with Saranac Lake and its vicinity, and the results of the open-air treatment that I have been able to observe there, my remarks will refer principally to that section, although I do not consider the climatic conditions there in any way superior to those of numerous other places in the Adirondacks.

This place is becoming more and more popular each year as a health resort to both physicians and patients, and at present affords better living facilities and more conveniences for invalids than most resorts of its size and kind. It has a population of about twenty-five hundred, is situated about a mile and a half from Lower Saranac Lake in the valley of the Saranac River, and has an altitude of about eighteen hundred feet. It is well

* Read before the Saratoga County Medical Society, December 16, 1898.

equipped with good hotels, boarding houses, and stores, and affords opportunities for various amusements. The temperature in summer rarely reaches 90° F., and the nights are always cool. In winter the average temperature during the day is about 20° F., causing the air and snow to be quite dry, the cold not being very noticeable on this account. The extreme cold occurs only at night, and reports of its intensity are often exaggerated.

About a mile and a half from the village is situated the Adirondack Cottage Sanitarium, the nature of which is so little understood by the profession, and the growth of which alone proves the virtue of climatic treatment in this location, that I wish to give a brief history of it and quote the methods and results of treatment there. The sanitarium was organized in 1885 through the efforts of Dr. Trudeau and several charitably inclined friends as a philanthropic institution, part of the expense being paid by the patients and the remainder received from contributions, and was the first institution of its kind in this country to be conducted on such principles. Only patients who are in poor or moderate circumstances financially, and who are regarded as either curable or capable of considerable improvement by the examining physicians, are admitted, and a large deficit, which gradually becomes larger each year as more patients are accommodated, is overcome by donations and subscriptions from persons who have become interested in the work and appreciate the good done by it. When the institution was founded, thirteen years ago, it consisted of three buildings having accommodations for nine patients. It has steadily grown, until now it forms alone quite a settlement, consisting of twenty-three buildings, mostly cottages, and is capable of accommodating about a hundred patients. It has now a small endowment fund and a free-bed fund providing for quite a number of patients. The cottages are all arranged on the same general plan, consisting of a reception room with from two to five bedrooms opening into it. Large open transoms are above each door, and also open from reception room to outside, thus insuring a open circulation of air when ventilators or windows of bedrooms are partially opened. The temperature in the cottages is kept rather low at all times, some being heated by stoves, but those more recently built by hot water. During the summer tents are used by many, both in and outside the sanitarium, stoves being provided for drying them in case of rain, life in them being for the majority both beneficial and enjoyable. However, I can not dwell on this subject at length, as I do not intend to give a full description of the institution. The fundamental principles of treatment consist of rest in the fresh air and nourishment; dress of all kinds occupying a decidedly inferior place, and regarded only as adjuncts.

Patients are required to stay out of doors from eight to ten hours a day, regardless of weather, and to choose

with cottages thoroughly ventilated during both summer and winter. It is remarkable how soon they become accustomed to this life, and how few colds are contracted by it. Only one case of lobar pneumonia has developed in the sanitarium since it has been in existence.

The majority of the patients become so hardened in a short time that they sit out on the cottage verandas voluntarily the greater part of the day, even during the coldest and most stormy days of winter, being at that time of the year warmly wrapped in furs and protected from the wind by glass windows on one side of the veranda or by screens that can be moved about at will. The clothing, of course, demands considerable attention, especially during the cold weather. Heavy, loose-fitting, woolen underclothes, usually of the so-called fleecy-lined variety, are found very satisfactory. Most of the fur coats used are quite long and have high collars for the protection of the neck and ears. Heavy felt leggings, with leather moccasins or felt shoes, are used for the protection of the feet and lower limbs when patients are walking about. When they are resting, these parts are further protected by wrapping them in blankets, some placing the feet in boxes containing warm soapstones. Sweaters are also worn by many of the men during this season of the year.

Care has to be taken that the clothing is sufficiently heavy to keep the patient warm without causing noticeable perspiration. During the summer months the clothing is about the same as that used in this latitude, except that woolen underclothes are generally worn. Nose breathing is practised by all patients, and its effect in alleviating catarrhal conditions is very noticeable. In non-febrile cases the patients are encouraged to take a moderate amount of exercise, but none to walk more than about two miles a day. Skating and other sports not requiring much exertion are allowed to a limited extent. Patients whose temperatures remain normal until late in the day, and then only rise to a slight extent, are also allowed to exercise, but are warned to stop if the temperature is exaggerated by it. Patients with continuous fever, or with decided elevation in the afternoon or evening, are kept as quiet as possible until the temperature falls to normal or quite near that point, and it is remarkable how soon this happens in most cases when the directions given are faithfully carried out. Carriage and sleigh riding are allowed freely, except to those having high temperatures or other symptoms of decidedly active disease. Horseback riding, wheeling, mountain climbing, and other forms of violent exercise are prohibited, as it has repeatedly been proved that much harm may result from the exertion of any kind. Breathless exercise, such as rowing and particularly arrested racing, is not allowed, as such exercise is still active.

The diet is composed of the best quality of food, fats and carbohydrates being used in moderation, and the

as this is another most important point in the treatment, particular attention is paid to the quality and preparation of the food. Meats of all kinds, eggs, milk, butter, the cereals, vegetables, and fruits are consumed in large quantities, and patients having no contraindications, such as disorders of digestion or high temperatures, have explained to them the necessity of taking large quantities of nourishment.

Instead of giving numerous light meals during the day, as is practised in some sanatoria, three regular hearty meals a day, with lunch in the evening for those who wish it, are given, except in febrile cases, when the patients receive nourishment more often. A great deal of milk is consumed between meals, patients taking it to their cottages and using it at will.

Cod-liver oil in moderate-sized doses, and creosote in the form of the carbonate in small doses, are given to some patients, but only continued with those who improve under its administration, being immediately discontinued as soon as the stomach begins to rebel or nutrition becomes faulty.

Arsenic and iron are used in cases in which there is much anaemia, the former seeming to be of special value to patients who are able to tolerate it. Different preparations of the hypophosphites are also used as tonics.

Night sweats seldom require medicinal treatment in the incipient cases here, or even in the more advanced cases, the outdoor life soon causing them to disappear. When they persist, a cool sponge bath containing a little alcohol at night is generally sufficient; if it is not, camphoric acid and atropine are used. For hæmorrhage, rest in bed, morphine, ice-bags, digitalis, and cracked ice by the mouth are used. In extreme cases ligation of the extremities is practised. For loss of appetite and poor gastric digestion, nux vomica and the mineral acids are mainly depended upon. For constipation, which is very frequently the result of superalimentation and lack of exercise, cascara sagrada or an iron, strychnine, and belladonna pill is usually given. For the cough, a menthol spray to the larynx and codeine are found to be most satisfactory. Alcohol in any form is seldom prescribed, as in the incipient cases it is usually unnecessary. Hydrotherapy is limited to the general warm bath and cool sponging. The latter, when used systematically, seems to assist greatly in the hardening process, besides stimulating the circulation and causing the patient to feel invigorated temporarily.

The treatment by inhalations is used only to a very limited extent. The pneumatic cabinet was used for several years, but, as no better results were obtained in patients taking that treatment than in those who simply sat out of doors, its use has been discontinued.

Quoting from a paper recently published by Dr. Trudeau in the *English Practitioner*, the results obtained at the sanitarium for 1897 and 1898 are as follows, patients not remaining more than three months not being included in the table:

"Number of patients treated, 203; average time of treatment, nine months.

Condition of patients when admitted.	Apparently cured.	Disease arrested.	Improved.	Unimproved.	Died.
Incipient 75	55	16	2	2	0
Advanced 84	15	38	19	11	1
Far advanced 44	0	7	19	13	5
Total 203	70	61	40	26	6

"The necessity of making an early diagnosis is emphasized by study of this table, which shows that, while not a single patient in the far-advanced class was cured, fifty-five, or seventy-three per cent., of patients in the incipient class, which represents the earliest stage at which the disease can be recognized, were apparently cured."

Outside the sanitarium the treatment is carried out with more or less faithfulness on the same lines, but for persons of limited means, who are often too ill to be admitted to the sanitarium, the living conditions are occasionally very unsatisfactory.

It will be seen by these facts that the cure of tuberculosis is best obtained by very simple means, but requires time, patience, and perseverance on the part of both physician and patient, and especially the hearty cooperation of the latter.

NOTE ON

OBLITERATION OF THE UMBILICAL VESSELS BY ELECTRO-HEMOSTASIS WITH THE SKENE FORCEPS, IN LIEU OF LIGATION.

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THERE is a weak spot in obstetric antisepsis. It is not a little curious that we should deliberately elect sloughing and suppuration as the method of healing of an obstetric wound. It has occurred to the writer more than once that a late puerperal infection, or a septic process in the breast consequent on a fissured nipple, or the lack of union in a primary perineal repair, might have its cause in the decomposing umbilical stump. The process is a dry gangrene, the slough separating from the fourth to the fifteenth day, granulation continuing from seven to twenty days. Putrilage is occasionally found. Warmth, moisture, and pocketing favor sepsis. Few nurses have been trained to carefully make traction on the stump in the daily dressing, and, at the same time, draw back the skin folds so that every crease and cranny is exposed. Even with a dry pack of every crease with aristol or iodoform or other powder, we can not be sure that the wound is not contagious; under such a crust I have found pus. The nurse takes no special precautions to sterilize her hands every time she comes in contact with the abdominal regions of the

baby. In the smaller maternities, where the same nurse dresses cords and cares for the patient in labor, the risk is evident.

Other Methods of Ligation.—We may treat this stump as we do in other amputations, by making sure that there is no material left to undergo necrotic change. It ought not to be difficult to isolate the vessels at the junction of the skin and the amnion when the jelly of Wharton has been stripped out and ligate each vessel separately with catgut or very fine silk. Then the vessels could be cut off close to the ligature, the stump of the cord carefully dissected away along the skin edge, the skin closed over with a subcuticular silk suture, a drying powder dusted on, and a small pad of gauze applied. The adhesive strap and the binder would complete the dressing. Oozing from the capillaries that run a few millimetres into the cord should be easily checked by the suture and pressure.

Such a method would be feasible only in maternities, or in the hands of men used to clean surgery. The open method now in vogue insures good drainage. The closed method just described, unless undertaken in a trained and conscientious manner, would favor arteritis, phlebitis, or other dangerous infection of the navel. Even with the open method I have seen in consultation erysipelas, gangrene, phlebitis, and tetanus.

Another objection to the closed-in method is the skill required to treat a secondary hæmorrhage. With the usual procedure the nurse can readily arrest bleeding by a second ligature. If the cord is cut too short for this, the ordinary direction is that one should pass a hairclip pin through the abdominal wall and across the stump, slip in another at right angles to this, and tie beneath them. This is easy but crude. In maternity work the resident would open up the wound, find the bleeding vessel, and ligate it, even if it is retracted.

The main objection consists in the difficulty of delicate manipulation on a heaving belly wall.

Treatment of the Cord with Dr. Skene's Forceps.—The ideal method must accomplish three results. The vessels must be securely and permanently controlled; infection must be out of the question—must be impossible; and the danger of hernia reduced to a minimum. A procedure already beyond the experimental stage accomplishes all these results. Electro-hæmostasis with Dr. Skene's forceps is not a charring process nor a roasting process, but a drying process.* The vessel or the stump grasped in the bite of his instrument becomes within the space of half a minute to two minutes a white, horny ridge, comparable to the edge of one's finger nail in consistency and color. This edge does not slough, but promptly becomes reorganized. As Dr. Pryor has shown, water pressure applied to the vessel from behind will make it burst elsewhere, but not at the end thus treated.

I propose that in our maternities we give this method a trial. When the child is removed from its mother, the cord is caught in two Keith clamps and cut, but not ligated. The cord is stripped of its jelly at its base. A square of gauze five or six layers in thickness may be split up to its centre. The slit is passed about the stump, which lies at the apex of the V, and the cut sides are then lapped over, so that the skin of the abdomen is protected from any heat. This gauze should have been wrung out of some solution so that it is damp but not dripping. Or a perforated square of asbestos, sterilized by flaming, may be substituted. The jaws of the Skene clamp are vaselined, and the clamp is applied so that the edge next to the abdominal wall is placed at the junction of skin and cord. While the cord is drawn upward, the clamp is closed firmly to its last notch. The clamp is lifted away from the abdominal wall, and the current is turned on for about two minutes. A little bubbling will occur as the juices sizzle out. The amount of heat is said to be about 180° F. After the clamp is removed, the scissors should cut through the desiccated, flattened part of the cord rather close to the abdominal side so as to leave but a narrow ridge projecting. This part of the cord seized becomes organized tissue, and, I believe, will ordinarily retract without leaving a projecting button.

One can imagine two conditions to which this method would be inapplicable. Where there was any doubt whether a tiny umbilical hernia existed or not, it should not be used. Where the junction of skin and amnion was in a rather deep pocket in the abdominal wall, it is possible that one would not feel justified in putting traction enough on the cord to pull up its skin edge to the surface, so that the clamp could be applied and the shield used without burning the skin around it.

To imitate this method, though very imperfectly, in the absence of the Skene outfit, a pile clamp and a Paquelin cautery may be employed. The utmost care must be used, in order that the stump may be left dry, white, and horny, but nowhere must it be black or charred; otherwise sloughing will occur.

To theorize a little further, judging from the results after hernia operations—a sounder scar should result from either of the two methods here advocated than from the ordinary process of granulation.

NOTE.—Since the foregoing was written cases have been treated with striking results. They will be reported before the American Gynecological Society in May.

Racial Characteristics. M. Paolo Mantegazza (*Nuova Antropologia, Triest, 1897*, January 11th), in an attempt to study the racial characteristics of different nationalities, has summarized the consensus of opinion of five out of six races, and one each of the six with the following results: In the opinion of the other five, Italians are a thence and crafty, French, impressionable, inconstant, and easily alarmed, ingenious and enthusiasts; English, cold and self-reliant, hypocritical, and vainglorious; Spaniards, violent and vain-glorious; and Russians, neurotic.

* Skene, *Electrodermatology in Surgery*, New York, D. Appleton and Company, 1899; *New York Medical Journal*, March 1, 1897, and February 18, 1899.

FORMALIN

IN THE TREATMENT OF WHOOPING-COUGH.

By HOWARD S. OLLIPHANT, M. D.,
NEW ORLEANS.

For the past year I have been experimenting with a solution of formalin in the treatment of whooping-cough. The results have been so gratifying I am prompted to report them in the columns of your journal. From my experience I am fully convinced that formalin is as much of a specific for this most distressing and dangerous disease as mercury is for syphilis or quinine for malarial fever. This mode of treatment and results convince me of the purely local nature of the infection of pertussis. The literature of this disease advances the theory that the infection is first located in the fauces, the air-passages and general system becoming infected by the multiplication of the germs. I am thoroughly persuaded that the infection remains local and that the systemic effects are incidental and result from the exhausting cough peculiar to the disease. When fever is present it is doubtless due to some coincident inflammatory action rather than to the specific germ of the disease. This idea is fully borne out by the rapid disappearance of all symptoms of pertussis after the formalin treatment, which consists purely of local applications. Carbolic acid, menthol, and other germicidal agents have been used locally with marked beneficial results, and have been duly extolled by the profession, but I am the first, so far as I know, to use formalin in the treatment of whooping-cough. Formalin is recognized as one of the most powerful and efficient germicidal agents in purifying disease-infected premises, and I am convinced it is the remedy, *par excellence*, for the destruction of the germ of whooping-cough, whether located in a crevice of a room or on a part of the human anatomy, provided the remedy is properly applied.

Whooping-cough is considered to be self-limited, lasting six weeks or two months under the ordinary treatment. With the formalin treatment the duration of the severest cases was less than a week, and several cases, after three applications, were cured. The mortality of this disease is classed third in the list of dangerous diseases peculiar to children. The heavy death-rate is doubtless due to complications arising during its long and exhaustive course under the ordinary treatment. With the formalin treatment after the third application to the throat marked improvement was observed, and in one case a complete cure. I look upon pertussis as simply an infection of the fauces—a place perfectly accessible to disinfection, and therefore curable in a few days. Free emesis follows each application, thereby dislodging the germs as well as destroying them. In the first case I treated after this method the vomiting was so severe the mother became alarmed and called to see me about it. The solution was ordered diluted. Out of twenty cases treated with this remedy not one failed to be cured

in less than eight days. I have seen cases in consultations with a *confrère* who was much pleased with the treatment, and pronounced it a specific. In conclusion, I would warn against too strong a solution being used in cases of young and debilitated children.

2316 CAMP STREET.

Therapeutical Notes.

Antemetic Mixtures.—The *Gazzetta degli ospedali e delle cliniche* for February 2d attributes the following to Weglesworth:

R	Menthol	15 grains;
	Alcohol, { of each	600 "
	Syrup, {	
	Chloroform water	1,050 "

M.

A dessertspoonful every half hour.

For the vomiting of pregnancy and bilious vomiting the following are given:

R	Carbolic acid	from $\frac{1}{10}$ to $\frac{4}{10}$ grains;
	Chloroform	5 drops;
	Syrup, { of each	1,800 grains;
	Distilled water, {	
	Tincture of bitter orange peel,	q. s.

M.

A dessertspoonful every two hours. Some spoonfuls of water should then be administered from time to time.

A Mixture for Dry Bronchitis with Paroxysmal Dyspnoea.—The *Riforma medica* for February 6th gives the following:

R	Alcohol solution of nitroglycerin (one per cent.)	12 drops;
	Alcoholic nitric ether	225 grains;
	Solution of chloroform in alcohol (ten per cent.)	120 "
	Water	2,400 "

M.

A tablespoonful to be taken every three or four hours.

For Convulsive Cough.—The *Riforma medica* for January 28th gives the following:

R	Fluid extract of thyme	165 drops;
	Syrup	1,050 "

M.

Three to six dessertspoonfuls daily, well diluted.

An Irrigation for the Acute Angina of Children.—The *Riforma medica* for December 21st credits the following formula to Marfan:

R	Crystallized carbolic acid ...	10 $\frac{1}{2}$ grains;
	Oil of thyme	3 drops;
	Glycerin	450 grains;
	Water	1,500 "

M.

A Creosote Enema.—Martz (*Province médicale*, January 28th) gives the following formula:

R	Creosote	10 parts;
	Oil of sweet almonds	200 "

M.

S.: A tablespoonful as an enema, morning and evening.

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THE WORK OF THE MASSACHUSETTS VOLUNTEER AID ASSOCIATION.

THE organization of this association, planned apparently somewhat on the lines of the old United States Sanitary Commission of the civil war, was effected last May. The work attempted and accomplished by it during the recent war with Spain is set forth in a most interesting and satisfactory way in a publication entitled *The Medical Work of the Massachusetts Volunteer Aid Association during the Spanish War*, recently published in Boston, presenting contributions by Dr. Herbert L. Burrell, Mr. J. T. Boyd, Dr. E. H. Bradford, Dr. J. T. Bottomley, Mr. W. H. Seabury, Miss C. W. Cayford, Dr. E. G. Brackett, Dr. W. H. Prescott, Dr. James Booth-Clarkson, Dr. T. B. Shea, Dr. Myles Standish, Dr. J. B. Blake, Dr. F. G. Balch, and a number of committees and subcommittees.

Considerable space, naturally, is devoted to the association's hospital ship *Bay State*, and there are many instructive pictures that show her construction and her appliances. Dr. Burrell, Mr. Boyd (an engineer), Dr. Bradford, Dr. Bottomley, Mr. Seabury (the ship's volunteer purser), and Miss Cayford (who had charge of the nursing) all contribute articles on the ship and the service it performed, which was most excellent. It is interesting to note that the *Bay State* is said to be the first aid association ship that has ever been equipped under Article XIII of the Geneva Convention.

Miss Cayford concludes that patients who are seriously ill can not be nursed so efficiently on shipboard as on land. Contrary to her expectation, however, she found that seasickness did not appear to interfere with the patient's improvement; but it was hard on the nurses at times, as will appear by the following remark: "The bathing could be carried out without discomfort to the patient, but was more or less of a strain on the back of the nurse, and was an especially trying thing to do when the nurse was sick."

Miss Cayford's views on nurses' uniforms seem to us sensible and worthy of heed. "Pongee silk may have its uses," she says, "but a working uniform on shipboard is not one of them. If seasickness is due in part to a mental condition, no wonder so many of us were so ill on the first trip. A more forlorn, ridiculous, and

tesque—and to ourselves melancholy—uniform could not have been devised. The most practical thing for a nurse's uniform on board a hospital ship is a short skirt of fairly heavy material (like duck or denim), shirt waist with celluloid collar, and gingham aprons. The whole should be of some neutral color—blue, brown, or green, as very light or white clothing is unpractical on shipboard." This is no trifling matter. As we have before now insisted, the uniform of a soldier should be attractive as well as serviceable, and we are quite prepared to believe that the same thing is true of a nurse's uniform. We are glad that so good an authority as Miss Cayford has not hesitated to express herself on this point.

The association's work in Santiago is described by Dr. Brackett, and Dr. Prescott recounts his experience at Camp Wikoff. Dr. Prescott is not sparing of criticism, but evidently he writes in no spirit of unkindness. The physicians, he says, varied in ability and character, but their average was above what one would find in any large city. They ranged from the ass who "cut off the uvula of a patient suffering with diphtheria, that he might breathe more easily" (for which exploit he was discharged), up to such men as Nanerode, of Ann Arbor, Senn, of Chicago, and Delafield, of New York. On the whole, Dr. Prescott regards the camp as an ideal one, and he is sure that the water was not unwholesome to begin with and not contaminated up to the time that the use of filters rendered any possible contamination harmless. "Complaint has been made," says Dr. Prescott, "that taps were not sounded, salutes fired, nor sufficient attention paid to the dead. As the cemetery was within one hundred yards of the hospital, the cruelty and danger of taps and salutes can be readily appreciated. On one day there were seventeen deaths, and, if these ceremonies (proper and impressive though they be) had been performed, I believe that fifty more men would have died among the sixteen hundred patients then in the hospital as a result."

Dr. Booth-Clarkson tells the story of the *Bay State's* medical staff's experience in Puerto Rico, and a most interesting one it is, but we have not space to do more than mention it. The association's ambulance corps's service and adventures on the steamship *Leicester* are dealt with by Dr. Shea and Dr. Standish. Dr. Blake writes of the Massachusetts volunteers at Camp Thomas, and Dr. Balch describes the reception of the sick soldiers in Boston. Viewed from whatever standpoint we may take, the association's work appears in the highest degree efficient and commendable, and it is well that the record of it has been brought out in so agreeable a form.

HYDRAULIC DILATATION IN CONTRACTION OF THE BLADDER AND STRICTURE OF THE URETHRA.

In the *Canada Lancet* for February Dr. Hugh H. Young gives the results attained at the Johns Hopkins Hospital in the treatment of cystitis by means of intra-vesical irrigations by hydraulic pressure without the use of a catheter. Four cases are quoted, the cystitis being of thirty, ten, six, and fourteen years' duration respectively. All the cases showed excellent results, the capacity of the bladder being greatly increased in the course of treatment, in one case to sixteen times its initial capacity. The quantity of urine voided at one time was also multiplied many times, while the intervals between micturition became lengthened. There is considerable pain apparently dependent on the treatment. It is asserted that it is easy to irrigate the bladder without a catheter through very tight strictures, and in case of very large prostate, with a hydraulic pressure of seven feet. The atony of the bladder consequent upon paraplegia is also said to be combated by the "massage" of alternate distention and evacuation. The technique is as follows: A fountain syringe with an eight-foot tube and a special conical nozzle (to be obtained from Hynson & Westcott, of Baltimore) is used. The patient lying on his back, properly protected from wet, the fluid used (two per cent. boric-acid solution with the occasional use of a stronger antiseptic—*e. g.*, one to five hundred of silver nitrate, or one to one hundred and fifty thousand bichloride of mercury, is the author's recommendation) is allowed to play over the glans and retracted foreskin. Then the nozzle is crowded tightly into the meatus, holding the penis behind the corona between the thumb and finger, and the bag is raised to seven feet. When the sphincter gives way and the fluid begins to flow into the bladder, the bag is lowered to five feet, and the flow of fluid permitted to continue until considerable pain is felt. Then the nozzle is withdrawn and the fluid allowed to be voided. The patients soon learn to conduct their own irrigations without aid. The irrigations in the author's cases were repeated four times daily. The author cites his own cases in refutation of the opinion expressed in one of the latest works on genito-urinary surgery that such dilatation is useless and can not be too strongly condemned.

It would seem as though this treatment were worthy of more extended trial, due caution being observed. The author experimented with negative results, using a solution of methylene blue, to ascertain if any danger existed of the fluid being forced into the ureters.

MINOR PARAGRAPHS.

THE CONSCIENCE OF A CONSCIENTIOUS OBJECTOR.

THE *Gazette médicale de Paris* for February 4th gives the following incident as illustrative of the value of "conscientious" objections to vaccination in many instances. The new law in England demands that to obtain the protection of the conscience clause in the vaccination act it is necessary that the parent should present himself, within three months, before the magistrate, and claim exemption from the necessity of vaccination for his child on the ground that "in his conscientious opinion" vaccination would be prejudicial to the child's health. Many of the magistrates who believe in the efficacy of vaccination lose no opportunity of demonstrating the value of the applicant's idea of conscience. A father recently presented himself before Mr. Plowdin, the magistrate at Marlborough Street Police Court, London, claiming exemption for his child from vaccination. It transpired that he had exceeded the allotted time for making application by twenty-four hours. Notwithstanding this, the parent insisted on his right to exemption on the ground of "conscience." "What!" said the magistrate, "you talk to me of your conscience, and you have forgotten all this time what it required of you. Are you aware that I can impose six months' imprisonment upon you, and that with hard labor?" At this threat the applicant expressed his purpose of submitting. Then the magistrate said: "That shows how much your conscience is worth. You pretend to believe that vaccination would place your child's life in danger, yet you hesitate in fear of a few weeks' imprisonment to stand by your convictions. However, don't be alarmed. I will accept your declaration in spite of the delay, and fine you two shillings for default." It may be that after all, through the action of judicious magistrates, the conscience clause may ultimately exercise an educational effect upon the public mind among such as are merely led astray by crowd suggestion, and are not essentially fanatics.

THE SALE OF SECRET REMEDIES IN GERMANY.

We learn from the *Riforma medica* for February 1st that a recent decree of the German Minister of Internal Affairs imposes upon the sale of all secret remedies in Germany the same precautions and regulations as are in force regarding poisons and other dangerous preparations. This is a good move, and one well worthy of imitation in other countries, if it is limited to the restrictions named.

CIDER AS A GERMICIDE.

THE *Wiener medizinische Blätter* for January 19th cites Bodin's observations (*Revue scientifique*) to the effect that cider is destructive of certain pathogenic micro-organisms, including the bacillus of typhoid fever, and, hence, that the addition of contaminated water to the apple juice is not likely to spread disease. This he attributes to the malic acid present in cider, but Berthelot ascribes it to the aldehyde contained in it.

THE SURGERY OF THE SUPRARENAL CAPSULE.

IN a Greifswald inaugural dissertation O. Bartels (*Centralblatt für Chirurgie*, February 11th) reports a

case of a mulberry calculus as large as a pigeon's egg removed from the kidney by the extraperitoneal operation. The suprarenal capsule was found rather firmly adherent to all the surrounding structures except the kidney, and to have undergone a tumorlike enlargement. It was removed piecemeal and found to be typically tuberculous. There was no bronzing of the skin.

THE COMPARATIVE SAFETY OF ETHER AND CHLOROFORM ANÆSTHESIA.

In the December number of the *Nordiskt medicinskt Arkiv* Wanscher accounts for the fact that late German statistics do not agree with those of the English-speaking peoples as to the strikingly greater safety of anæsthesia with ether than that with chloroform by the remark that ether was introduced into German practice just at the time when laparotomy came into vogue, and was chiefly used in such grave operations.

THE DEATH OF "CAVENDISH."

The death is announced from London of Mr. Henry Jones, M. R. C. S., better known to the world as "Cavendish," the recognized authority on whist, than as a medical man. Mr. Jones had, however, for very many years abandoned the practice of his profession, but in helping to popularize innocent recreation he undoubtedly contributed toward the maintenance of the *mens sana* so inextricably associated with the *corpus sanum*.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending February 25, 1899:

DISEASES.	Week ending Feb. 18, Week ending Feb. 25.			
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	15	1	18	7
Scarlet fever.....	155	16	170	18
Cerebro-spinal meningitis.....	0	3	0	0
Meningitis.....	210	9	217	3
Diphtheria.....	161	11	181	21
Whooping-cough.....	15	6	12	0
Tuberculosis.....	255	187	281	191
Small pox.....	0	0	0	0
Chicken pox.....	13	0	13	0

The Death of Mr. Thomas Cooke, F. R. C. S.—In the sudden death of Mr. Thomas Cooke, F. R. C. S., which is announced from London, a distinguished feature has passed from the teaching world of medicine in London. Mr. Cooke in 1870 founded a private school known as the London School of Anatomy and Physiology, and many American physicians who have put in a little time in London will remember it and the genial person of its founder and teacher. He met with great opposition for a long while, but so persevering, so conscientious, and so excellent was his work, an antagonist of the old school that the London School of Anatomy subsequently was empowered to sign up the necessary attendance of medical students on the anatomical course required by several qualifying bodies, in place of the regular anatomical schools belonging to the various medical colleges. He was related to all his work, and

respected by every one who knew him, and his loss will be widely mourned in all parts of the world; for his school was a rendezvous for foreign and provincial practitioners who, having time to spend in London, availed themselves of the opportunity to brush up their anatomy by actual practical work under his shrewd and insistent direction, or to take out a practical course of operative surgery on the cadaver.

Thrombosis and Embolism Post Partum.—Singer (*Archiv für Gynäkologie*, 1898, vol. lvi, p. 218; *Gazette hebdomadaire de médecine et de chirurgie*, January 29th) arrives, from a study of his own cases with others recorded in the literature of the subject, at the following conclusions: 1. The formation of thromboses is commonly indicated several days in advance of other symptoms by the progressive augmentation of the pulse rate, whose modification depends on the progressive development of the thrombus and on its resulting augmentation of the blood pressure. The graphic curve of these modifications is very characteristic. 2. On a typical curve of this kind we may see the temperature remaining the same as before, the pulse chart mounting progressively and attaining its maximum coincidently with the appearance of oedema, or the cord formed by the thrombotic or the pulmonary symptoms. At the same time the temperature rises; but while the elevation of the temperature does not last long, the pulse persists for several days at the height previously attained.

Lectures on Comparative Pathology.—We learn that Dr. Woods Hutchinson, of Buffalo, who is at present sojourning in London, has been invited to give a course of sixteen lectures on comparative pathology in the new Polytechnic and Graduates' College.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general of the United States Marine-Hospital Service during the week ending February 25, 1899:

Small pox.—United States.

Los Angeles, Cal.....	Feb. 17.....	35 cases, 7 deaths, in all since date of outbreak. Origin believed to be Arizona. 25 cases in hospital.
Sacramento, Cal.....	Feb. 1-17.....	1 case.
San Diego, Cal.....	Feb. 19.....	1 " 1 death
San Francisco, Cal.....	Feb. 1-17.....	1 "
Washington, D. C.....	Feb. 15.....	1 new case
Washington, D. C.....	Feb. 16.....	1 " case
Washington, D. C.....	Feb. 21.....	1 " "
Prosboly, Kan.....	Feb. 16.....	21 cases in all
.....	.....	1 case
.....	.....	There have been 56 cases in 13 families, with 7 deaths
Carroll County, Mo.....	Feb. 1.....	1 case, 1 death
St. Louis, Mo.....	Feb. 1.....	1 " "
Chowan County, N. C.....	Feb. 16.....	1 " "
Columbus County, N. C.....	Feb. 16.....	1 " "
Cincinnati, Ohio.....	Feb. 16.....	1 " 8 cases, 8 deaths
Columbus, Ohio.....	Feb. 1-9.....	1 " 1 case
Philadelphia, Pa.....	Jan. 7-13, 21.....	1 case
Bedford County, Pa.....	Jan. 7-13, 21.....	1 " "
Lehigh Township, Pa.....	Jan. 7-13, 21.....	1 " "
Jackson, Madison County, Tenn.....	Feb. 11.....	1 " "
Memphis, Tenn.....	Feb. 2-16.....	1 " "
London, Tex.....	Feb. 2-16.....	1 " 1 death
Alexandria, Va.....	Feb. 8.....	1 " "
No. folk, Va.....	Feb. 8.....	1 " "
Piedmont, Va.....	Feb. 1-8.....	1 " "

Small-pox—on Vessels.

Jap. S. S. <i>America Maria</i> , from Yokohama for San Francisco via Honolulu. Jan. 25.....	2 cases.	
U. S. S. <i>S. Costa Rica</i> , from Hongkong for San Fran- cisco.....	2 "	
		at Hongkong; arrived February 9th.
Str. <i>Hatteros</i> , Smithfield, Va., for Norfolk.....	1 case.	
Str. <i>Loep</i> , from North Caro- lina for Norfolk, Va.....	1 "	
Shoop <i>Mary Ann</i> , James River for Portsmouth, Va. Feb. 10.....	1 "	(suspected).

Small-pox—Foreign.

Rio de Janeiro, Brazil.....	Dec. 31-Jan. 6.....	10 cases,	4 deaths.
Cairo, Egypt.....	Jan. 19-26.....		1 death.
South Shields, England.....	Jan. 22-28.....	1 case.	
Paris, France.....	Jan. 28-Feb. 4.....	1 "	
Bombay, India.....	Jan. 17-24.....		2 deaths.
Singapore, India.....	Dec. 1-30.....	13 "	
Chihuahua, Mexico.....	Feb. 4-11.....		1 death.
Chihuahua, Mexico.....	Feb. 11-18.....		1 "
Ciudad Porfirio Diaz, Mexico.....	Feb. 11-18.....	6 cases.	
Mexico, Mexico.....	Feb. 5-12.....	2 "	
Xuxero Laredo, Mexico.....	Feb. 11.....	40 "	
Vera Cruz, Mexico.....	Feb. 2-16.....		1 "
Odessa, Russia.....	Jan. 26-Feb. 4.....	4 "	1 "
Warsaw, Russia.....	Jan. 22-28.....	3 "	
Constantinople, Turkey.....	Jan. 22-30.....		8 deaths.
Smyrna, Turkey.....	Jan. 15-22.....		3 "

Yellow Fever.

Rio de Janeiro, Brazil.....	Dec. 30-Jan. 6.....	16 cases,	11 deaths.
Vera Cruz, Mexico.....	Feb. 2-16.....		3 "

Cholera.

Bombay, India.....	Jan. 18-24.....		3 deaths.
Calcutta, India.....	Jan. 1-7.....	78 "	
Calcutta, India.....	Jan. 7-14.....	35 "	
Madras, India.....	Jan. 14-20.....	35 "	

Plague.

Bombay, India.....	Jan. 17-24.....		456 deaths.
Calcutta, India.....	Jan. 7-14.....		2 "

Oil in the Treatment of Plague.—Dr. J. V. Ramaswamy Nayudu (*Indian Lancet*, December 16, 1898) calls attention to the ancient use of olive oil in plague, and the extensive evidence of its powers of prophylaxis. He says that Mr. Baldwin, the British consul at Smyrna, observed that out of nearly a million people who died of plague in Egypt in the space of four years, there was not a single oilman or dealer in oil. Taking this hint, he suggested unction with olive oil as a protective against plague. The method was first tried in 1792 when twenty-two Venetian sailors repeatedly anointed with the oil lived for five days with three infected persons (all of whom died) without a single individual catching the infection. Three Armenian families consisting of twenty-seven persons were saved from infection by adopting this precaution, though they lived in the same floor and constantly attended on plague patients. The nurses in the plague hospital at Smyrna were also thus effectually protected against infection. On the 14th of June, 1819, in answer to a question from a select committee of the House of Commons, Sir Brook Faulkner, physician to the forces at Malta, said that the military attendants at the pest hospital were protected against infection by wearing a dress of oiled silk. In 1891, Sir J. McGregor recorded in the medical sketches for the year that during the Egyptian campaign all men employed in applying oil to the feet of camels escaped the plague. Mr. Jaclon recorded in page 16 of a book on the *Commerce of the Mediterranean*, that the coolies

working in the oil stores at Tunis smeared themselves with oil and that they were rarely affected when the epidemic raged in the city.

The oil was subsequently tried as a curative in the early stage of the disease and was found to answer well; and for this purpose it was applied warm all over the body.

The Rev. Lewis, of Pavia, chaplain and agent to the hospital called St. Anthony's at Smyrna, after trying this oil for five years pronounced it to be the most efficacious of all remedies made use of during a period of twenty-seven years. His directions were simply these:

"Immediately after a person is perceived to be infected with plague, he must be taken into a close room, and over a brasier of hot coals, with a clean sponge dipped in warm olive oil, his body must be very briskly rubbed all over, for the purpose of producing a profuse sweat. During the friction, sugar and juniper berries must be burned in the fire, which raise a dense and hot smoke, that contributes to the effect. The friction ought not to be continued more than four minutes, and a pint of oil is enough to be used at each time. In general the first rubbing is followed by a very copious perspiration; but should it fail of this effect the operation may be repeated, first wiping the body with a warm dry cloth; and in order still further to promote perspiration, the patient may take any warm sudorific drink, such as elder-flower tea, etc. It is not necessary to touch the eyes; and other tender parts of the body may be rubbed more gently. Every possible precaution must be made use of to prevent the patient taking cold, such as keeping covered those parts of the body not directly under the operation; nor must the linen be changed till the perspiration has entirely subsided. The operation should be repeated once a day until evident symptoms of recovery begin to appear. If there are already tumors on the body they should be gently and more frequently rubbed till they appear to be in a state of suppuration, when they may be dressed with the usual plasters. The operation ought to be begun on the first appearance of the symptoms of the disease; if neglected till the nerves and the mass of the blood are affected or a diarrhœa has commenced, little hope can be entertained of cure; but still the patient should not be despaired of, as by an assiduous application of the means proposed some few have recovered even after diarrhœa had commenced."

Encouraged by the success which attended the external use of the oil in curing plague, it was tried internally. In 1829, two hundred persons were thus treated, and the remedy was found to fail in ten cases only.

The mode of administration was as follows:

As soon as infection was caught (this probably means as soon as symptoms of the disease appeared) four to eight ounces, according to the strength of the constitution, were given to the patient. This produced profuse sweating, which seemed to expel the poison. The sudorific action of the drug was aided by taking decoction of elder berries (*Sambucus nigra*). The oil in some cases acted as an emetic, in others as a purgative, but profuse perspiration was a general rule and the most favorable sign for recovery. The efficacy of the drug was so great that the Moors, who were generally averse to taking any medicine internally, especially for plague, readily took to it. In a village near Tangier a father who had lost his wife and four children by plague adopted this treatment and saved himself and four other children. To render the drug more efficacious the oil was subsequently used both internally and externally

Incisions into the Hairy Scalp.—Dr. George H. Monks (*Boston Medical and Surgical Journal*, February 16th), noticing the fact that scars in the scalp often seemed to be unduly broad, as the result of careful investigations concludes that this result is due to the nature of the incision (whether accidental or purposive) and its relation to the direction of the hair root. He advises, therefore, that whenever it is necessary to make an incision into the hairy scalp in the back of the head, and especially when it is particularly desirable to conceal the scar, the knife should be held in a position at right angles to the surface of the skin where a vertical incision is to be made, but in a position oblique in reference to the skin whenever a transverse incision is contemplated. That is to say, as the knife passes into the scalp the blade should be kept parallel to the course of the hair so as not to divide them. The same principle, says, may also find its application in the treatment of scalp wounds, whenever it becomes necessary to close the raw edge of the wound before stitching them together.

The Prurigo of Pregnancy.—At a recent meeting of the French Society of Dermatology and Syphilography M. Gaston (*Gazette hebdomadaire de médecine et de chirurgie*, February 16th) drew the attention of the society to the existence of a prurigo of which he had made a special study with Dr. Cathelin-au. The predominant localization of this prurigo, he said, was upon the arms and thighs, and it supervened on pregnancy in patients previously free from any similar manifestation. It was unaccompanied by any bullous lesions. M. Gaston contrasted this prurigo with herpes gestationis, and mentioned the existence of an analogous affection accompanying uterine troubles apart from pregnancy.

The Medical Society of City Hospital Alumni, of St. Louis.—The programme for the meeting on Thursday evening, the 2d inst., contained the following titles: The Surgical Treatment of Chronic Empyema, by Dr. Francis Reeder; A Report of a Case of Cerebral Haemorrhage with Temporary Glycosuria, by Dr. R. B. H. Gradwohl; and Multilocular Ovarian Cyst, by Dr. Henry Jacobson. The subject for discussion at the meeting on the 16th inst. will be The Medical Inspection of School Children and the Hygiene of Schools.

The New Editor of the Journal of the American Medical Association.—The *Journal* for February 25th announces that Dr. George H. Simmons, of Lincoln, Nebraska, has been elected its editor. We wish Dr. Simmons all possible success in his new career.

An Antivivisectionist Quarrel.—*Science* for February 21th says that a suit is being brought by the treasurer of the New England Antivivisection Society to prevent the former president from disposing of the funds of the society. A law-suit, adds *Science*, is, perhaps, the most innocent disposition that could be made of these funds.

A Prize in Memory of Dr. Hermann Müller.—We learn from *Science* for February 24th that the Vienna Medical Club has voted the sum of three hundred golden crowns for the establishment of a prize in memory of Dr. Hermann Franz Müller, who recently died of plague contracted in the bacteriological laboratory of Vienna.

Changes of Address.— Dr. A. McNeil Blair, to No. 221 Prospect Avenue, Buffalo; Dr. M. L. Carr, to No. 353 West Fifty-seventh Street, New York; Dr. A. H. Hulsizer, to No. 1514 North Fifteenth Street, Philadelphia; Dr. Ruel B. Karbe, to Hotel Majestic, New York; Dr. William E. Thomas, to No. 18 Hanson Place, Brooklyn.

Army Intelligence. *Official List of Officers in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 18 to February 28, 1881.*

ARMSTRONG, LUCY M., First Lieutenant, U. S. Assistant Surgeon, U. S. Army, Department of the Interior, U. S. Office of the United States.

BAVISTON, JOHN M., Moderator. Since 1961, he has held
 as a member of the Executive Committee of the National
 Council of the World Council, N.Y. Mr. BAVISTON is
 a member of the Executive Committee of the World Council
 since 1961.

CLARK, MARGARET M., Secretary. She is a member of the
 Executive Committee of the World Council, N.Y. Since 1961
 she has held the position of Secretary of the Executive
 Committee of the World Council, N.Y.

DUVAL, DOUGLAS F., First Lieutenant and Assistant Surgeon, is detailed as a member of the board of officers appointed to meet at West Point, N. Y., March 1st, for the examination of candidates for admission to the Military Academy.

FISHER, HENRY C., Captain and Assistant Surgeon, is relieved from further duty at Plattsburgh Barracks, N. Y., and will proceed to Madison Barracks, N. Y., for duty, to accompany the Ninth Infantry to Manila.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. His resignation of his commission as First Lieutenant and Assistant Surgeon, Fourth Volunteer Infantry only, is accepted.

HEG, ELMER E., Major and Brigade Surgeon, will proceed to Havana and report to the commanding general for duty.

MUNN, CURTIS E., Major and Surgeon, and SMITH, LOUIS P., First Lieutenant and Assistant Surgeon, are detailed as members of the army retiring board appointed to meet at Denver at the earliest practicable date for the examination of such officers as may be ordered before it.

WYETH, MARLBOROUGH C., Major and Brigade Surgeon, will proceed to Havana and report to the commanding general, Division of Cuba, for duty in charge of the medical supply depot to be established in the vicinity of the city of Havana.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending February 25, 1899:*

KINYOUN, J. J., Passed Assistant Surgeon. To proceed to Albany, Ga., for special temporary duty. February 18, 1899.

WERTENBAKER, C. P., Passed Assistant Surgeon. To rejoin station at Wilmington, N. C. February 20, 1899.

BREADY, J. E., Acting Assistant Surgeon. Granted seven days' extension of leave of absence from February 9, 1899. February 18, 1899.

GERRISH, W. H., Acting Assistant Surgeon. Granted leave of absence for thirty days on account of sickness. February 18, 1899.

O'REILLY, W. J., Acting Assistant Surgeon. Granted leave of absence for two days from February 28, 1899. February 16, 1899.

PHILLIPS, E. L., Acting Assistant Surgeon. Granted leave of absence for fifteen days. February 18, 1899.

Resignation.

PHILLIPS, E. L., Acting Assistant Surgeon. Resignation accepted as tendered, to take effect upon the appointment and qualification of his successor. February 9, 1899.

Society Meetings for the Coming Week:

MONDAY, *March 6th:* New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morristania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Alban, Vermont, Medical Association; Providence, Rhode Island, Medical Association (annual); Hart-

ford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, *March 7th:* New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Medical Society of the County of Herkimer, N. Y. (annual—Herkimer); Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Essex, Massachusetts, South District Medical Society (annual—Salem); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *March 8th:* New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Medical Societies of the Counties of Albany and Montgomery (quarterly), N. Y.; Pittsfield, Massachusetts, Medical Association (private); Worcester, Massachusetts, District Medical Society (Worcester); Philadelphia County Medical Society.

THURSDAY, *March 9th:* Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; The Jenkins Medical Association, Yonkers, N. Y.; Medical Societies of the Counties of Cayuga and Cortland (quarterly), N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, *March 10th:* Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *March 11th:* Obstetrical Society of Boston (private).

Births, Marriages, and Deaths.

Born.

MILLIKEN.—In Dallas, Texas, on Friday, February 10th, to Dr. and Mrs. Samuel E. Milliken, a daughter.

Married.

ALLEN—BELL.—In Lake Providence, Louisiana, on Monday, February 20th, Mr. T. W. Allen and Miss Della Bell, daughter of Dr. William D. Bell.

BLAIR—ANDERSON.—In Marion, N. Y., on Wednesday, February 15th, Dr. A. McNeil Blair, of Buffalo, and Miss Josephine Caroline Anderson.

COOKE—WEST.—In New York, on Thursday, February 16th, Dr. Henry Arnold Cooke, of Boston, and Miss Bertha Helen West.

JARRATT—TAYLOR.—In Port Gibson, Mississippi, on Thursday, February 16th, Mr. Bernard E. Jarratt, son of Dr. Ashbury L. Jarratt, of Horn Lake, Mississippi, and Miss Julia Taylor.

KARIBE—NOBLE-EARLE.—In New York, on Thursday, December 22, 1898, Dr. Ruel Bidwell Karibe and Mrs. Clara Noble-Earle.

PENNIG—EISCHIN.—In Buffalo, on Wednesday, February 23d, Mr. Frank L. Pfennig and Miss Anna Eischen, daughter of Dr. David C. Eischen.

THOMSON—FREEMAN.—In Savannah, Georgia, on Monday, February 20th, Dr. Edgar S. Thomson, of New York, and Miss Martha Shelman Freeman.

VAN ARSDALE—WHITE.—In New York, on Tuesday, February 21st, Dr. William Waldo Van Arsdale and Miss Edith May White, daughter of Dr. Whitman V. White.

Died.

BENHAM.—In Hudson, N. Y., on Sunday, February 19th, Dr. John C. Benham, in the eighty-third year of his age.

CUTTER.—In New York, on Sunday, February 19th, Mrs. Rebecca S. S. Cutter, wife of Dr. Ephraim Cutter.

DAY.—In Newfoundland, N. J., on Wednesday, February 23d, Florence Elizabeth Day, daughter of Dr. Edward A. Day, of Brooklyn.

HEACOCK.—In New York, on Friday, February 24th, Dr. Willard Avery Heacock, in the thirtieth year of his age.

HEWITT.—In Hoosick Falls, N. Y., on Saturday, February 18th, Dr. Clifford Hewitt, in the forty-fourth year of his age.

KEANE.—In New York, on Tuesday, February 21st, James F. Keane, son of Dr. J. J. Keane, in the twenty-first year of his age.

STONE.—In Savannah, Georgia, on Sunday, February 19th, Dr. George H. Stone.

WARD.—In Brooklyn, on Saturday, February 25th, Dr. John E. Ward, of Coney Island, in the fifty-fourth year of his age.

Obituaries.

George H. Stone, M. D., of Savannah.—The death of Dr. Stone, which occurred on February 19th, removes from the Southern medical profession a well-known and highly accomplished practitioner. He was looked upon as a yellow-fever expert, and in the epidemic of 1876 in Savannah he did notable service. Dr. Stone was born in Albion, N. Y., and graduated in 1868 from the medical department of Georgetown University. During the War of the Rebellion he served with the Northern forces, and settled in Savannah in 1873. For two years he was president of the Georgia State Medical Society.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

VIII.

CONTRACT OF PATIENT WITH PHYSICIAN.

(Continued from page 301.)

Contract Implied on the Part of the Patient. A contract on the part of the patient, as well as on the part of the physician, is created by law. Such contract, like the one of the physician, is based upon and grows out

of the relations of the parties, and is in its nature complementary to the contract of the physician.

Contract to Pay Physician's Fees.—The right of the physician to charge and recover compensation for his services is very seldom the subject of an express agreement between the physician and patient; yet the physician is quite as secure in this right as though it were fixed by formal agreement, it having been long settled that where a person avails himself of the benefit of services done for him, even though without his positive authority or request, the law supplies the formal words of contract and presumes him to have promised an adequate compensation. It may therefore be laid down as a general rule that whenever a patient employs or receives the services of a physician he is bound to pay a reasonable compensation for such services.*

A notable exception to this rule formerly existed under the law of England, which treated the services of the physician as honorary and gratuitous, and did not permit him to recover a compensation therefor unless the patient was bound by a special agreement to pay. The services of the surgeon were not considered of the same honorary character, and he was therefore able to recover his fees without a special agreement. Under the medical act passed in the twenty-first and twenty-second years of the reign of Victoria, physicians, if duly registered, are entitled to recover reasonable compensation for their services without any express contract providing for such compensation, thus being placed on the same footing in this regard as physicians in the United States.

Liable for Subsequent Visits.—It will be remembered that a physician undertaking the treatment of a case is bound to continue his visits as long as the condition of the patient requires his attention. The counterpart of this obligation may be found in the implied contract which the law creates requiring the patient to pay the physician not only for the first visit, which he has expressly requested, but for all further visits or services which the physician and surgeon makes or renders by reason of the necessities of the case.†

Liable for Fee of Consultant.—The patient is bound not only to pay the attending physician, but also the physician who is called to a consultation, and this has been held to be the law notwithstanding there is an agreement between the attending physician and patient that the attending physician shall pay the expenses of such consultation‡.

The reason for this rule may be readily seen. It has been observed that where a party knowingly and without objection permits another to perform services for him, the law implies a promise to pay what the services are reasonably worth. Consequently, when a physician is called to a consultation, even though it be by the attending physician, it is fair for him to presume that the consultation is for the benefit of the patient, and to rely upon the promise of payment which the law makes for the patient. The agreement of the attending physician to pay the consultant is unusual and exceptional, and being contrary to the ordinary presumption of law the consultant will not be bound unless he has notice of such arrangement.

It is doubted, however, whether a patient is bound by an implied contract to pay for medical services of a

* Crane v. Burbank, 65 Barb. 503; Peck v. Martin, 1, Ind. 415.

† Dale v. Donaldson Underhill, 45 N. Y. 188.

‡ Sheldon v. Johnson, 40 Iowa, 84; Green v. Stadler, 6, Wis. 517.

physician called in by her attending physician for the mere purpose of convincing her that he is doing all that can be accomplished for her, where such physician, in fact, rendered no services for her and was not called in at her request.*

It is pertinent to state at this point that should the patient be required to pay the consulting physician after the attending physician has agreed to defray this expense, the patient may recover the amount so paid by him from the attending physician, or he may treat it as a counterclaim and deduct the amount from fees earned by the attending physician.

Contract of Obedience.—It is a well-settled proposition of law that it is the duty of the patient upon placing himself in the hands of a physician to follow strictly all instructions and conform to the necessary prescriptions and treatment, if they are such as a physician or surgeon of ordinary skill and care would adopt or sanction. As a disregard of this obligation results to the injury of the patient only, it does not give the physician a cause of action against the patient; yet if the patient endeavors to recover damages from the physician for injuries which he maintains result from unskilled treatment, the physician and surgeon may, by showing that the patient is guilty of such negligence or disobedience, prevent his recovery.†

Sunday Contracts.—In the absence of statutes to the contrary, any contract executed on Sunday is as valid and binding as though executed on a week day. Each State has, however, passed laws requiring the observance of Sunday. In all States labor is prohibited, and in most States the transaction of business is made unlawful upon the Sabbath. In those States which go so far as to prohibit labor only, one is free to enter into contracts and to execute promissory notes and other instruments which are perfectly valid; but in those States which prohibit the transaction of business, any instrument or contract made or entered into on Sunday is invalid and can not be enforced even though one of the parties may have performed his part of such contract. If, for instance, goods are sold and delivered on Sunday, or services are rendered on that day, the party receiving the goods or enjoying the benefit of the services is under no obligation to pay for them.

These statutes, however, unanimously except from their operation contracts made to carry out works of necessity or charity, and the courts have held, whenever the question has been raised, that the contract of the physician falls within this exception, and that it is binding in all respects both upon him and upon the patient.‡

Letters to the Editor.

A HOSPITAL FOR ACUTE CASES OF INSANITY.

BROOKINGDALE ASYLUM, WHITE PLAINS, N. Y.,
February 20, 1899.

To the Editor of the New York Medical Journal:

SIR: The subject of a hospital for acute and recent cases of mental disturbance, situated in New York city

and near the medical schools, is not a new one, but it appears that now from various directions the subject is again being approached. The desirability of such a hospital can hardly be doubted if the practical difficulties can be met. It should, I think, be a public hospital, and no particular coterie of medical men should monopolize its advantages, but it should be open to all, in order to obtain public recognition and support. Another advantage of a public hospital would be that the responsibility for restricting the liberty of certain patients, who undoubtedly would require that such an authority be at times exercised, would not be assumed by individuals, but by the State, which stands as the protector as well as the custodian of such sufferers from mental disease as are incapable for the time of exercising a proper judgment and self-restraint. If a new departure in the direction of a hospital for such cases of mental disturbance as may be transitory in their nature is established, it should have the support and authority and protection which the representatives of the State in this department of public charity could give it.

The practical difficulties, while not small, are not insuperable, and could be overcome if public spirit and professional unselfishness characterized the effort. The State now has a central institute for investigating the causes of insanity. The president of the State commission in lunacy, who is in close touch with the institute, is well acquainted with insanity in all its clinical manifestations. Were this institute in close proximity to a hospital devoted to acute and often transitory attacks of insanity, there might result from the State expenditure of money a mutual advantage to the hospital and to the central investigating institute.

The practical difficulties include a place for these joint and closely related efforts. No special size or shape of rooms is necessary in treating insanity, though certain advantages are obtained in suitable hospitals; but for a trial of a new combined hospital for transient cases, none to remain long, and contiguous space for the work of the pathological institute, temporary accommodations might be found, without waiting to build at public expense, or for some philanthropist to open his heart and his pocketbook. Large buildings are constantly being abandoned, like the New York College building, the old Columbia College, the Woman's Hospital, etc., part of one of which might be temporarily obtained for an experiment of the kind referred to. If it became a great success, suitable accommodations could come later. As a temporary provision for a certain number of insane persons, it would bring relief to the present inadequate provision for them, and would to some extent do away with the present imperfect provision for urgency cases at Bellevue Hospital; and it would be a distributing point for chronic or unsuitable cases to the present public and private establishments.

Such a combined hospital and psychopathological laboratory, centrally and wholesomely situated, where economy and efficiency had their proper relation, would have a distinct hospital work of great value, and would give facilities for clinical teaching and higher investigation regarding insanity which can hardly be overestimated, facilities at present conspicuous by their absence on account of the practical inaccessibility of the present hospitals for the insane to the medical students.

A valuable editorial on this subject appeared in the New York Sun of February 19th.

SAMUEL B. LYON, M. D.,
Medical Superintendent.

* *Schneider vs. Hoover*, 51 N. W., 163.

† *Haile vs. Reese*, 7 Phila. (Pa.), 138; *Davis vs. Spicer*, 27 Mo. App., 79; *Jones vs. Angell*, 95 Ind., 376.

‡ *Smith vs. Watson*, 11 Vt., 337; *Alfrich vs. Blackstone*, 128 Mass., 115.

Book Notices.

A Text-book of Obstetrics. By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania. With Six Hundred and Fifty-three Illustrations. Philadelphia: W. B. Saunders, 1898. Pp. 14 to 846.

IN this work the subject is divided into seven parts, as follows: Pregnancy, the physiology and management of labor and of the puerperium, the mechanism of labor, the pathology of labor, the pathology of the puerperium, obstetric operations, and the newborn infant. The first three parts are well written and contain all that the student will require, but two parts on the pathology of labor and of the puerperium, while being full and up to date in certain respects, are far too meagre in others.

The illustrations throughout the book are original and for the most part particularly good. The chapters on obstetric operations are admirable in text and illustrations. The closing chapters are devoted to the physiology and pathology of the newborn infant, and they cover the subject fairly well. While, as a text-book, Dr. Hirst's treatise may not be an improvement over one or two of those already adopted in our medical schools, as an addition to the obstetrician's books of reference we can heartily recommend it.

Diseases of Women. A Treatise on the Principles and Practice of Gynecology for Students and Practitioners. By E. C. DUDLEY, A. M., M. D., Professor of Gynecology, Northwestern University Medical School, etc. With Four Hundred and Twenty-two Illustrations, of which Forty-seven are in Colors, and Two Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1898. Pp. xi-637.

FROM an author of Dr. Dudley's mature and rich experience and vigorous individuality one would hardly expect a work which would not be both profitable and interesting. The book which he has produced justifies the expectation, and this, be it remembered, at a time when there is no dearth in the production of excellent and satisfactory treatises on gynecology. The author has diverged somewhat from the usual lines in the plan of his work, considering the subject under five pathological heads or divisions—viz.: I. General principles. II. Inflammations. III. Tumors, malformations, and fetal pregnancy. IV. Traumatism. V. Displacements and pelvic massage. This arrangement is not altogether satisfactory, for it would manifestly be quite impossible to adhere strictly to it.

The changes in procedure which have marked the progress of gynecology in the hands of experienced and thoughtful men are to be noted in the chapter on local treatment. Routine measures, swabbing the vagina, applications to the interior of the uterus, the indiscriminate employment of pessaries have had their day, and a more, more direct therapy is prevailing. This is emphasized by the author, and if such a plan has diminished the number of visitors to the consultation room, it will be added to the good of the community in more ways than one, and has placed our art upon a more scientific and rational basis. In the matter of dilatation of the uterus, we would suggest that the description of the method for that purpose might henceforth be omitted from the text-books. With the means for rapid instrumentation of dilatation which are available, tents, of whatever material

composed, are practically obsolete, and they offer greater opportunities for mischief in the average case than instrumental dilators.

The chapters on the various forms of metritis are clearer, more logical, and more sensible than are to be found in some of the other text-books on gynecology. The development and diffusion of pelvic surgery have had much to do with the removal of this pathological stumbling-block.

The descriptions of surgical techniques are clear, concise, and forcible. There is seldom any doubt as to the author's meaning, and he reaches it by direct and forcible statement, as one would expect who has ever been brought into personal contact with him.

Why was the long chapter on pelvic massage placed at the end of the book? Did the author half or more than half agree with many of his *confreres* that this measure, like some others which have promised much, was passing?

Renal Growths; their Pathology, Diagnosis, and Treatment. By T. N. KELYNACK, M. D. (Vic.), M. R. C. P. Lond., Pathologist, Manchester Royal Infirmary, etc. With Ninety-six Illustrations. Edinburgh and London: Young J. Pentland, New York: The Macmillan Company, 1898. Pp. xiii-269. [Price, \$4.]

DR. KELYNACK has presented us with an interesting monograph upon a subject which from the standpoint of the pathologist is one of the highest interest, but of extreme difficulty. This is the first systematic treatise upon tumors of the kidney which has yet appeared in English, and the author's main pretension is "to indicate the work already accomplished and to suggest lines for further research."

This he has accomplished exceedingly well, but it is fair to say that his personal contribution to the subject is not great. The book is largely a compilation of the clinical histories and pathological findings of the more recently reported cases of renal tumors. The recorded observations of the older surgeons and pathologists are, unfortunately, almost valueless for scientific comparison, for the classification and nomenclature employed by them were indefinite and confused.

Dr. Kelynack has done good service in his industrious collection of the records of many well-studied cases, and his interesting and suggestive book is a welcome contribution to our meagre knowledge, for it renders easily accessible a large amount of valuable information, and judiciously reflects much that belongs to a better past.

The subject is treated chiefly from the point of view of the pathologist, though the clinical aspect of the matter is always held in view, and symptoms, signs, and diagnosis are fully discussed.

The chapter upon treatment, possibly the most original exposition of the subject, is composed of a large series of well-illustrated cases, each with an emphatic opinion regarding the best mode of treatment, early and radical, or conservative.

It will be a long time before the author's individual authoritative treatment can be generally accepted and written. In the chapters upon the pathology of the various renal tumors, the descriptions of the gross and microscopic changes, and of the clinical course of the disease, are well known to the student and the practitioner.

Principles of surgery, and of the treatment of the

quent during infancy and early childhood and even in prenatal life. These facts argue a close relation with developmental faults.

A logical classification of renal tumors must lean upon their embryogeny, and a formal treatise devoted to them demands a more exhaustive consideration of the embryonic development of the kidney than the author has afforded us. In this respect the book is a disappointment. The classification adopted is one based upon histological structure, but the author has fallen into some curious inconsistencies. For instance, the tumors of the adrenal are grouped with the adenomata, although he considers, strangely enough, that the adrenal is of strictly mesoblastic origin. The possibility that certain tumors hitherto referred to the sarcomata should be attributed to endothelial proliferation is briefly mentioned, but the subject is not further developed.

The writer is a pathologist, but pathologists will not find that he has thrown much light upon their difficulties.

The book is beautifully published and profusely illustrated with photographic reproductions which show gross appearances unusually well. There is an exhaustive bibliography.

Tropical Diseases. A Manual of the Diseases of Warm Climates. By PATRICK MANSON, M. D., LL. D. (Aberd.), Fellow of the Royal College of Physicians, London, etc. With Eighty-eight Illustrations and Two Colored Plates. New York: William Wood and Company, 1898. Pp. xvi-607.

"A MANUAL on the diseases of warm climates, of handy size, and yet giving adequate information, has long been a want; for the exigencies of travel and of tropical life are, as a rule, incompatible with big volumes and large libraries. This is the reason for the present work. While it is hoped that the book may prove of practical service, it makes no pretension to being anything more than an introduction to the important department of medicine of which it treats; in no sense is it put forward as a complete treatise, or as being in this respect comparable to the more elaborate works by Davidson, Scheube, Rho, Laveran, Corre, Roux, and other systematic writers in the same field."

Thus says the author in the preface, and we quote it at length because it seems to us to describe the work well. For the rest, it may be said that the book comprises seven sections, or parts. The first treats of tropical fevers; the second, of general diseases whose nature is unsettled, such as beriberi and the sleeping sickness; the third, of abdominal disease, the most important of all being cholera; the fourth, of the infective granulomata; the fifth, of animal parasites and the ills with which they are connected; the sixth, of skin diseases of warm climates; and the seventh, of local diseases whose nature is uncertain, *anthrax* for example.

We can not too warmly commend the book, for it is of an arrangement and size admirably fitted to fill the place of which the preface speaks, and, moreover, the material has been well sifted and clearly presented throughout. The work, it is true, is not exhaustive, but it is by no means meagre, and many a more pretentious volume contains far less of the valuable and the useful. It may be held that we as practitioners in a temperate clime have no need of works which treat of diseases of the tropics, but if such a statement were to be made it would need no serious consideration and certainly no rebuttal. Clearly the field this work covers

is one in which all serious-minded medical men should have ample knowledge and information. For the use of such as these we can suggest no source more generally useful than the work before us.

A Manual of Surgery for Students and Practitioners. By WILLIAM B. ROSE, M. B., B. S. Lond., F. R. C. S., Professor of Clinical Surgery in King's College, London, etc., and ALBERT CARLESS, M. S. Lond., F. R. C. S., Senior Assistant Surgeon to King's College Hospital, etc. New York: William Wood & Co., 1898. Pp. viii-9 to 1162.

WHEN one considers the great number of surgical treatises, text-books, and manuals which have appeared during the past few years, nearly all of which exhibit the evidences of careful preparation, it is difficult to understand why many able surgeons are willing to devote so much of their valuable time to an occupation which promises little return, for no one will for a moment maintain that all these additions to the literature of surgery are needed, because the field has already been covered many times by writers upon every variety of surgical subjects—producing works of all sizes and successfully meeting every condition and want of the specialist, general practitioner, and student.

The manual recently presented to the profession by Rose and Carless, however, possesses many features of unusual merit; and if one could have access to but a single volume on surgery, we know of no book of the same size which could be relied upon to furnish more accurate knowledge or common-sense advice upon most surgical subjects.

In the first six chapters, which are devoted to surgical pathology, one can find a clear and concise statement of the essentials. In the chapters on fractures and dislocations the authors have been able to condense into a hundred pages the salient points in the diagnosis and treatment of these conditions; and in general the advice given is highly to be commended. The same may be repeated in regard to the treatment of head injuries, abdominal diseases, and hernia. The authors have, however, lowered their standard in some of the chapters upon special subjects. This is noticeably the case in those which treat of the diseases of the bladder and prostate and upon gonorrhoea and syphilis, none of which reflect views which could by any stretch of the imagination be regarded as modern.

These chapters bear the evidence of such marked ignorance as to the essentials of genito-urinary surgery as to lead to the belief that they were the perfunctory work of some assistant, rather than an expression of the views of the gifted authors.

Die Untersuchung und Begutachtung bei traumatischen Erkrankungen des Nervensystems. Ein Leit-faden für Praktiker. Von Dr. PAUL SEUTSTER, Assistent an der Prof. Mendel'schen Klinik in Berlin. Mit einem Vorwort von Prof. Dr. E. MENDEL. Berlin: S. Karger, 1899. Pp. 196.

THE relationship between injury and disease or disability has become one of the most important questions connected with medicine. In Germany, by the passage of the *Unfallversicherungsgesetz*, or accident insurance law, the interests of workmen or employees injured in the pursuit of their occupation are provided for. This involves careful examination and observation of the injured person, and consequently an increased general at-

tention to diseases and conditions resulting from injury. In this country court calendars are largely filled with personal-injury suits. There are now several periodicals devoted exclusively to the relationship between disease and accidents; the traumatic origin of various diseases, but especially of those affecting the nervous system, is much more frequently the subject of scientific investigation than it used to be. Monographs, such as Oppenheim's *Traumatic Neuroses*, Pearce Bailey's *Accident and Injury*, and the one now before us, are constantly appearing. That American physicians would do well to avail themselves more freely of the many opportunities for information on these subjects will be acknowledged by any one who is familiar with the character of much of the so-called expert testimony which is offered when a nervous malady becomes the subject of litigation.

While Dr. Schuster writes especially for the physicians who are brought in contact with the German law, his book is none the less to be commended to all who desire to familiarize themselves with the best ways of considering cases of traumatic nervous disease. His scheme for the important points to be brought out in reference to personal and ancestral history, as well as for the examination of the patient, is excellent. The subject of simulation also is handled in a much more common-sense way than is often done. As a kind of appendix, the histories and decisions in a variety of personally observed cases are cited. While the book is in no sense a treatise on diseases of the nervous system, it is a valuable *vade mecum* to the physician who is confronted by the problems to which they frequently give rise.

An Atlas of Bacteriology: Containing One Hundred and Eleven Original Photomicrographs with Explanatory Text. By CHARLES SLATER, M. A., M. B., M. R. C. S. Eng., F. C. S., Lecturer on Bacteriology, St. George's Hospital Medical School; and EDMUND J. SPITTA, L. R. C. P. Lond., M. R. C. S. Eng., F. R. A. S., formerly Demonstrator of Anatomy, St. George's Hospital Medical School. London: The Scientific Press, Philadelphia; J. B. Lippincott Company, 1898. Pp. xiv+120. [Price, \$2.50.]

This volume is the first attempt to produce at a reasonable price a fairly complete series of photomicrographs of pathogenic bacteria. The undertaking is most commendable, and the authors are to be congratulated on the evident success of their efforts.

The subjects treated include micro-organisms in stained smears, surface colonies, tube cultures, and infected tissues. The photographs of bacteria in smears are remarkably accurate productions, most of them showing exquisite detail in morphology. The photographs of colonies and tube cultures are very artistic and instructive, the dark backgrounds serving to bring into strong relief some of the delicate and important biological peculiarities of many species.

The authors' statement, that in bacteriology illustration by photography is more unsatisfactory than in any other branch of pathology, is fully verified by their own comparative failure to photograph bacteria in tissues successfully. In this department the picture is far less instructive than well-executed drawings. The photographs of malarial parasites also show very little of the morphology of these organisms. The authors are in error in offering a half grown pigmented tertian parasite as a "signal ring" form.

The introductory chapter, on the technique of photo-

micrography, indicates that the authors are familiar with all the modern refinements of the art, although they use a comparatively weak lime light, which is probably inferior to the carbon electric arc, and they apparently find no advantage in placing oil on the condenser. Their success has seemingly depended upon the careful choice of screens and upon laborious focusing.

A Manual of Bacteriology. By HERBERT W. WILLIAMS, M. D., Professor of Pathology and Bacteriology, Medical Department, University of Buffalo. With Seventy-eight Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. x+10 to 263. [Price, \$1.50.]

WITH the considerable number of condensed textbooks on bacteriology now within reach of the medical student and practitioner, any new contribution to this class must embody some very distinctive features to attain more than a limited circulation. This volume covers all departments of the subject, and the space devoted to many topics of importance is necessarily very limited.

The facts presented are principally those of immediate use for the beginner in this study, and the compilation has apparently been prepared for and is well adapted to the wants of the author's students. Beyond this field the volume is probably not expected to go, as it embodies no new facts, and has no distinctive features that may recommend it over other works of double its size.

Formulaire des médicaments nouveaux pour 1899. Par H. BOCQUILLON-LIMOUSIN, Membre des sociétés de pharmacie et de thérapeutique, etc. Avec une introduction par HENRI HENRIARD, Membre de l'Académie de médecine. Paris: J.-B. Baillière et fils, 1899. Pp. viii+9 to 332.

MANY of our readers are no doubt familiar with this excellent little book, the admirable qualities of which we have described in notices of its earlier editions. That its language may militate against its full measure of usefulness with American readers is of course true, but medical French is not as a rule a difficult matter, and in the present instance becomes less an obstacle than usual because of the pithy and sententious style of composition that is employed. If one cares to be informed upon the "description," "pari used," "therapeutics," "method of employment," and "dose" of all of the most recent drugs, and that in small space and authoritatively, he should possess himself of this volume.

Human Anatomy: A Complete Systematic Treatise, including a Special Section on Surgical and Topographical Anatomy. By Various Authors. Edited by HENRY MOHR, M. A., M. B. Lond., Surgeon to the Middlesex Hospital, etc. Translated by Seven Hundred and Ninety Writers. The Greater Part of which are Original Authors. A Handy for this Work by Special Arrangement. One Hundred printed in Colors. Second Edition. Philadelphia: Enlarged. Philadelphia: P. B. Blakiston's Son & Co., 1898. Pp. xxix+1274. [Price, \$10.00.]

It is a pleasure to welcome a new edition of this valuable anatomy. It is a work of great merit and a time as a new work of the same kind.

As in the first edition, the work is divided into

with the minute anatomy of the body, only what can be actually seen by dissection being described. Still, it by no means is to be put in the category of the so-called dissectors, as considerable space is devoted to the ontogeny and phylogeny of structures.

The illustrations, which were a marked feature of the first edition, have been further added to and in some cases improved. Additional chapters have been inserted on the skin and on vestigial and abnormal structures.

The work is a composite one, but the various parts have been so thoroughly revised by the collaborators that it is quite homogeneous, and the high reputation of the individual writers speaks for the whole.

We had hoped that in this edition the description of anomalous muscles, instead of having a separate place, would be inserted in the general description of the muscles of which they were variations. Still, the course followed is a small fault and readily condoned.

It is exceedingly refreshing to read this anatomy. Its descriptions are lucid, terse, and, best of all, correct. It certainly deserves the high place it has won among the foremost of our anatomies.

A Manual of Physiology. With Practical Exercises. By G. N. STEWART, M. A., D. Sc., M. D., Edin., D. P. H. Camb., Professor of Physiology in the Western Reserve University, Cleveland, etc. With Numerous Illustrations, including Five Colored Plates. Third Edition. Philadelphia: W. B. Saunders, 1899. Pp. 5 to 848. [Price, \$3.75.]

AN enlargement of some fifty pages has been made in the text of Professor Stewart's book, and twenty-two new figures have been added. In bringing the work as nearly as possible up to the date of issue, however, much of the original matter has been condensed to make room for what is new. The additions are well chosen and valuable, including the results of all important researches published since the date of the first edition, 1895. Cannon's work, for example, on the movements of the stomach as studied with Röntgen rays, published in May, 1898, is reported fully.

And the ready conversion of the results of research into text-book form has not been confined to the text alone. The practical exercises, excellent in the first edition, have been still further developed. Experiments to demonstrate the influence of gravity upon circulation and the effect of the injection of albumoses and suprarenal extracts, and of hemorrhage and transfusion, upon blood pressure may be taken as fair examples of the additions.

Throughout the entire volume there is a perfect balancing of the theoretical with the practical. This and the general style of the book recommend it most strongly to medical students, though the research worker will find in it a concise, reliable, and recent treatment of nearly every field.

BOOKS, ETC., RECEIVED.

The Principles of Bacteriology. By Dr. Ferdinand Hueppe, Professor of Hygiene in the University of Prague. Authorized Translation from the German by Dr. J. O. Jordan, Assistant Professor of Bacteriology in the University of Chicago. Chicago: The Open Court Publishing Company, 1899. Pp. x+167. [Price, \$1.75.]

The Microscope of Drinking Water. By George Chandler Whipple, Biologist and Director of Mount

Prospect Laboratory, etc. First Edition. First Thousand. New York: John Wiley & Sons, 1899. Pp. xii+300.

Railway Surgery. A Handbook on the Management of Injuries. By Clinton B. Herrick, M. D., Attending Surgeon to the Troy Hospital and the House of the Good Shepherd, etc. Profusely illustrated by Numerous Original Engravings. New York: William Wood & Co., 1899. Pp. xii+265.

Vaccination: its Natural History and Pathology. Being the Milroy Lectures for 1898 delivered before the Royal College of Physicians of London. By S. Monckton Copeman, M. A., M. D., Cantab., M. R. C. P. Lond., Medical Inspector to her Majesty's Local Government Board, etc. London and New York: The Macmillan Company, 1899. Pp. x+257. [Price, \$2.]

The Dawn of Reason, or Mental Traits in the Lower Animals. By James Weir, Jr., M. D. New York and London: The Macmillan Company, 1899. Pp. xiii+234. [Price, \$1.25.]

Notes on Surgery for Nurses. By Joseph Bell, M. D., F. R. C. S. Edin., Consulting Surgeon to the Royal Infirmary and to the Royal Edinburgh Hospital for Sick Children. Fifth Edition, thoroughly revised. Edinburgh: Oliver & Boyd. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1899. Pp. 9 to 194. [Price, 2s. 6d.]

New York Post-graduate Hospital. Fourteenth Annual Report of the Directors for the Year ending October 1, 1898.

Second Annual Report of the Forest Preserve Board of the State of New York for the Year 1898.

Reports of the Trustees and Superintendent of the Butler Hospital for the Insane. Presented to the Corporation at its Fifty-fifth Annual Meeting, January 25, 1899.

Thirteenth Report of the Lunacy Commission to his Excellency, the Governor of Maryland, December 31, 1898.

Clinical Report from the Winyah Sanitarium. Seventy-eight Cases of Pulmonary Tuberculosis Treated and Discharged in 1898. By Karl von Ruck, M. D., Director of the Institution, Asheville, North Carolina.

Positive Proofs that the Blood can Circulate without the Aid of the Heart. By Matthew Joseph Rodermund, M. D., of Appleton, Wisconsin. [Reprinted from the *Chicago Medical Times*.]

The Etiology and Diagnosis of Empyema of the Accessory Sinuses of the Nose. By Jacob E. Schadle, M. D., of St. Paul. [Reprinted from the *St. Paul Medical Journal*.]

The Physician in Practice. By Leo M. Crafts, M. D., of Minneapolis. [Reprinted from the *Journal of the American Medical Association*.]

Miscellany.

The Treatment of Pulmonary and Laryngeal Tuberculosis with Antiphthisic Serum T. R. Dr. W. Freudenthal (*Medical News*, February 18th), in a paper on this subject, records four cases of tuberculosis treated with the antiphthisic serum T. R. Dr. Freudenthal concludes his paper as follows: "Although these results are not so gratifying as those obtained by Dr. Carl Fisch

or by Dr. A. M. Holmes, of Denver, nor as unfavorable as those of Dr. F. E. Waxham, of Denver. I must say that I am of the opinion that this new serum is a remedy which should be tried much more extensively. When we have a series of hundreds of cases, carefully watched and recorded, we will be better able to pass judgment on its value. Until then all well-observed cases will help to form an opinion, and in furtherance of this object this report is published."

Behring vs. Calmette.—According to the *Journal of the Mississippi State Medical Association* for February, citing *Lancet*, November 5, 1898, and *Journal of the American Medical Association*, Dr. Calmette, Pasteur's well-known pupil, who was recently appointed as chief organizer of the Pasteur Institute at Lille, and who has won much fame by his researches into the question of immunity for serpent venom, has made another discovery of a more purely commercial nature. By this discovery he was enabled to manufacture alcohol very much purer and stronger than is usual at a distillery and at the same time much more cheaply. He sold his secret to a large factory near Lille and very soon realized the handsome sum of two hundred and fifty thousand francs. This he has handed over absolutely to the Pasteur Institute, over which he presides, although he is not personally a wealthy man. This act of munificence, which has been noticed solely by the medical press and ignored by the political journals, is considered as a protest against the recent action of Dr. Behring.

Ichthyol in Phlyctenular Disease of the Eye.—Dr. Wendell Reber (*St. Louis Medical Gazette*, February) concludes a paper on this subject as follows:

"1. That phlyctenulosis of the eye is nearly always of nasal or strumous origin; even when it is nasal it is rather to be viewed as the terminal expression of a constitutional vice.

"2. That phlyctenular affections of the eyes are peculiarly amenable to one- to two-per-cent. solutions of ichthyol when used jointly with hot stupes.

"3. That when the phlyctenular process has been cured, correct ordering of the daily life, regulation of diet, roborants and alteratives, and attention to the condition of the upper air-passages are all of equal importance from the standpoint of prevention, which is, after all, the only true goal. Should one of these phlyctenule develop near the centre of the cornea, the resulting scar would almost surely impair vision during the remainder of the patient's life; hence the importance of prophylaxis."

The Inflammability of Celluloid Hairpins to the Static Breeze.—According to the *Medical Register* for January 15th, the editor of the *Journal of Electro-therapeutics*, having had a most disagreeable experience, and what might have proved to be a serious accident, takes the opportunity of calling attention to the circumstance under which it occurred, that others may be on their guard for like contingencies. A young lady was being treated with the static breeze on the head through an ordinary static head-crown. The crown was about 10 or 12 inches from the hair, and was attached to a five or six feet pole of the battery direct, while the patient herself was in connection with the stool on which the battery sat. The day was clear, and the charge generated was moderately strong. But it was above the average of such treatments, it was only slightly so, and certainly not less than has often been given. The hat having been re-

moved, the shower came down in profusion over the head and shoulders, and was not at all disagreeable until suddenly a scream and the most painful expression of countenance gave warning that something had gone wrong. The motor was at once disconnected. A column of smoke arose from the patient's head while she continued to scream the louder. Before the narrator could reach her a second column of smoke, and then a third arose. He tore down the hair with all possible haste, and removed the charred remains of three celluloid hairpins, one of which was only partially destroyed. He succeeded in smothering the fire with his hands only after three spots of hair had been burned away, varying in size from a quarter to a half dollar.

The Diagnosis of Functional Heart Murmurs.—Dr. Maude E. Abbott (*Montreal Medical Journal*, January) concludes a paper on this subject as follows:

"The cases studied illustrate especially the following points: 1. In cases of anæmia, pulmonary accentuation is often associated with a pure accidental murmur. 2. Functional murmurs frequently occur when there is neither anæmia nor fever. They are then often associated with some other condition suggesting intoxication. 3. Diastolic murmurs have been noted which do not appear to have an organic origin. 4. Although accidental murmurs are generally heard at the base and those of relative mitral insufficiency at the apex, accidental murmurs are probably sometimes heard at the apex (as in moderate anæmias, where the murmur may occur at the apex unaccompanied by pulmonary accentuation or cardiac enlargement and disappear after a short time; or in high fevers, where a murmur at the apex is replaced after a few days by one at the pulmonary cartilage of the same character). On the other hand, murmurs produced at the mitral valve are occasionally, though rarely, heard best at the pulmonary cartilage.

"Two conditions which it may be quite impossible to distinguish from each other by physical signs are: A functional murmur at the apex with signs of moderate dilatation (relative mitral insufficiency), and an organic mitral murmur with signs of compensatory change. A decision can often only be reached by considering the patient's general condition and the persistency of the murmur. This last is the clinching point and is the final criterion to which uncertain cases must be brought. In plain terms, we must wait to diagnose the murmur until it is no longer there to diagnose."

Malarin, a New Antipyretic.—According to the *British Medical Journal* for January 21st, citing the *Therapeutische Monatshefte*, No. 10, 1898, a new antipyretic has been prepared by Valentiner and Schwarz. Malarin is a yellowish white powder, insoluble in cold water, but causes the powder to dissolve, and it does not cause any cooling. If the water is neutral or weakly acid, the addition of sodium malarin powder is freely absorbed. The physiological characteristics have been examined by Schwarz. He found that malarin was not a narcotic. A dog weighing four kilograms was given 0.5 gramme of malarin daily for five days, and showed no signs of intoxication. Schwarz also found that two grammes without any ill effect. The antipyretic action of malarin has been tested by giving it to a dog with a temperature of 40.5°C. The effect was a rapid reduction of malarin to 38.5°C. The antipyretic action of malarin also lowered the temperature of a dog with a temperature of 40.5°C. The antipyretic effect was produced by the malarin, and not by the water. In these cases only the malarin was given, and the water

of temperature, which end fatally. Malarin in these cases has a powerful effect in diminishing the convulsions, and in several instances actually stopped them, even when a fatal dose of the poison had been given. The convulsions produced by picrotoxine are not influenced by malarin. No clinical records have yet been made of the action of this drug, but, according to Schwarz, it may be used as an antipyretic and antispasmodic.

An Alcohol Dressing for the Umbilical Cord.—Herr Budberg (*Centralblatt für Gynäkologie*, 1898, No. 47, p. 1288; *Presse médicale*, January 11th) has employed an alcohol dressing for the umbilical cord in about two hundred cases. The alcohol possesses antiseptic properties, and is said to dissolve the fatty material and dry the tissues. After the infant has been bathed, the umbilical cord is dried and surrounded with absorbent cotton soaked in alcohol. Over this is placed a second dressing of absorbent cotton. The usual binder is then applied. This dressing is changed once or twice a day till the cord falls off. During this period it is best not to bathe the child. Either absolute or dilute alcohol may be used. No pain or irritation seems to follow the dressing.

Transverse Wound of the Wrist; Division of Extensor Communis Tendons; Suture of Cut Tendons to Tendon of Extensor Indicis.—Dr. Delamare (*Archives de médecine et de pharmacie militaires*, 1898; *Post-graduate*, January) reports the case of a soldier who was struck just below the wrist by a piece of glass, completely severing the tendon of the extensor communis digitorum, which ran to the middle, ring, and little fingers. Some days afterward an attempt was made to suture the tendon, but only the peripheral ends could be found. These three ends, therefore, were joined and sutured to the uninjured tendon of the same muscle running to the forefinger. As the tendon alone could not be trusted to furnish sufficient strength and firmness, the entire bundle of tendons of the extensor communis was sutured also to the tendon of the extensor indicis. Healing occurred by first intention. The functional result was admirable—the patient being able to move the fingers perfectly.

Rare Symptoms of Iodism.—According to the *Lancet* for January 21st, M. Danlos, at a recent meeting of the *Société médicale des hôpitaux*, described some rare symptoms produced by iodide of potassium. A man, aged sixty years, took seven grains and a half of iodide of potassium on one day and fifteen grains on the next, when he had slight signs of iodism—coryza and disagreeable taste in the mouth. There was considerable suprahoid tumefaction, symmetrical and not extending to the parotid region. There was no spontaneous pain and but little tenderness, and the color of the skin was not altered. The saliva was not affected. Palpation showed no ardor but an elastic swelling in which the submaxillary glands were felt to be swollen and a little tender. The iodide was supposed to be the cause and was stopped. Three days later the swelling had disappeared. To complete the proof a similar result was produced twice on administering the drug. Elimination of iodine was rather slow; two hours after administration there was scarcely a trace in the urine and it was found abundant on the following day. The only allusion to the subject which M. Danlos could find in literature was the statement of M. Lounier that in the treatment of syphilis, when the salivary gland, principally of

the parotid gland, had been noticed. Another case was related. An old patient of the Saint Louis Hospital who had suffered from syphilis was given daily forty-five grains of iodide of potassium. After ten days he complained of violent itching and an erythematous and bullous eruption developed. The iodide was stopped, but the eruption continued to appear, and twelve days later the itching was excessive, preventing sleep. There was a discrete bullous eruption on the back of the hands, feet, face, and ears. On the trunk and arms there were numerous erythematous patches and urticarial wheals both on and apart from the latter. The eruption declined under arsenate of sodium, but only after ten days' administration. A point of interest was that the eruption continued to appear for more than six weeks after the discontinuance of the iodide of potassium. Also the eruption was a typical dermatitis herpetiformis as described by M. Brocq—a form of eruption not previously observed as a result of iodism.

Orchitis as the First Symptom of Urinary Infection following Stricture.—M. Carlier (*Gazette hebdomadaire de médecine et de chirurgie*, January 26th) reported recently to the French Association of Urology two cases of old-standing blennorrhagia in which no troubles of micturition existed, or at least none such as to lead the patients to consult a physician, but in whom an attack of painful and swollen testicle with fever compelled them to do so. This appeared to be the first noticeable symptom of stricture. Internal urethrotomy promptly put matters right.

A Premonitory Symptom of Chloroform Poisoning.—Lehmann (*Journal de médecine de Paris; Revue médicale*, February 1st) has made observations on three hundred and twenty-nine cases of anæsthesia, in twenty-one of which was observed the fact that the patient kept the eyes partially or completely open, and reopened them on their being closed, and in each of these twenty-one cases various accidents supervened—*e. g.*, repeated vomiting (notwithstanding an empty stomach), sudden stoppage of respiration, a prolonged stage of excitement, and even symptoms of asphyxia and syncope calling for persistent artificial respiration. From these observations he concludes that this symptom should be regarded as a premonitory sign of more or less serious complications.

The Difficulties of the Practitioner of Medicine.—Dr. H. A. Tomlinson (*St. Paul Medical Journal*, February), in an article on The Personal Equation in Medical Practice, thus aptly describes some of the difficulties that beset the practitioner of medicine:

"The practice of medicine is singular in that it almost necessarily isolates its devotee from his fellows, and peculiar in that it depends upon a kind of knowledge which is not common and bears no relation to the ordinary affairs of men. Neither are the causes of success or failure to be estimated by any general standard. The most trifling case of illness, even, presents so wide a divergence between the abstract entity involved in the perverted physiological process and the illness as a whole, conditioned by all that enters into the environment of the individual who is ill, that to estimate the one by the other is impossible; as it is futile to attempt to determine by the history of an illness in one case exactly why another apparently similar should have run so different a course. More than in any other profession the physician is separated from his fellow workers. He has to meet the exigencies of ordinary practice alone, and often the

most extraordinary difficulties have to be encountered without the aid of any one. Again, his relation to those whom he is called upon to treat is peculiar and difficult. Conscious of the absence of certainty in the methods of diagnosis and treatment of disease, and the number of factors which, although their existence can seldom be definitely predicated, may enter into the aetiology or modify the course of disease in any individual, yet he must always, for his patient's sake, and to retain the confidence of the family, appear absolutely certain of his ground; precise and sure of the wisdom of every step taken. There is before him all the time the knowledge of the different standpoint from which the layman, through the influence of superstition and credulity, looks upon medical practice; so that he can not appeal to his patient's judgment to help him out, because the uncertainty on his part, born of knowledge of the limitations of medicine, appears, and is almost sure to be considered by his patient as evidence of ignorance and incompetence. He finally grows into a mental habit more or less narrow, according to his original bent and the breadth of his training; so that his judgment is practically uninfluenced by anything outside of the experiences which condition his own environment. His conclusions meet the test supplied by the exigencies of his practice. His patients get well as a rule, and when they do not he recognizes that after all human intelligence is limited and disease is sometimes bound to be fatal. Then, too, if the physician has been successful to more than the ordinary degree, he is bound to become somewhat autocratic, to resent any questioning of his authority or difference of opinion. So that while he may seek eagerly the enlightenment which comes from the written records of experience at a distance, he has little or no confidence in that of his fellows when they reach different conclusions from the same premises. He comes to wonder how such men ever attain any success in practice, and while he pities those who are under the care of such poorly equipped physicians, he comforts himself with the knowledge that the tendency of all acute disease is toward recovery. It is so easy for us to recognize the skilled physician in the man whose methods are the same as our own, and so difficult to see any evidence of trained knowledge in those who differ from us."

The Significance of the Pulse in Tuberculosis.—According to M. Durand (*Revue médicale*, February 8th), the examination of the pulse in tuberculosis is of the utmost importance. The condition is serious if the pulse rate is maintained above 100, desperate if it exceeds 120 for several days. Consequently, he says, the examination of the pulse permits us to recognize curable forms of tuberculosis, or at least those of slow progress.

Uterine Displacements.—Dr. W. J. Gow, physician accoucheur to out-patients at St. Mary's Hospital, London (*Indian Medical Record*, January 11th), concludes an introductory address, read before the Medical Society, as follows:

"1. Backward displacement of the uterus is a factor to be observed, not a disease to be diagnosed. 2. There are several kinds of backward displacement. 3. In only one form will a vaginal pessary maintain the uterus in an inverted position. 4. Angular retroflexion is not affected by the introduction of a vaginal pessary, and if, therefore, you are not inclined to use an intra-uterine stem, or perform vaginodilation or ventrofixation, the retroflexion remains unaltered by treatment.

5. A bend in the uterus somewhere about the junction of the body and supravaginal cervix is natural. Are we therefore to believe that a bend in a backward direction is fraught with such dire results as some would have us believe?"

Hyperpyrexia in Rheumatism.—Dr. H. G. Langwill (*Scottish Medical and Surgical Journal*, February) thus sums up an exhaustive and interesting paper on the Treatment of Hyperpyrexia in Rheumatism:

"Briefly, then, I would venture to suggest the following as a summary of the chief points in reference to the prophylaxis of rheumatic hyperpyrexia: 1. Cases in which the pyrexia shows a tendency to rise instead of decline under full doses of the salicyl compounds, and in which no intercurrent condition can be detected which might account for the increasing pyrexia, should be treated at once by cold applications without waiting for the onset of nervous symptoms or other prodromata of rheumatic hyperpyrexia. 2. When delirium appears in a case which exhibits pyrexia, and no intercurrent visceral complication can be made out which might account for its presence, the immediate employment of cold is called for. 3. Should delirium appear while the temperature remains normal, a mild form of cold application—*e. g.*, an ice-cap to the head—should be employed, and on the appearance of pyrexia more vigorous methods ought to be adopted without waiting for any extreme degree of pyrexia (*e. g.*, 105°) to be reached. 4. Cases in which the hyperpyrexia is, as it were, accidentally discovered to be present offer, of course, no field whatever for prophylaxis, but treatment by cold should be commenced at once without waiting for the appearance of nervous symptoms or attempting to reduce the temperature by means of any antipyretic drugs."

Finally, he says:

"The main conclusions I would draw from the consideration of the whole subject of hyperpyrexia in rheumatism are these: 1. That the condition is more prone to occur in the warmer months of the year, and apparently with greater frequency in certain years. 2. That while it is very difficult to estimate at all accurately the frequency of its occurrence, probably this is about 0.5 per cent. among adult cases of rheumatism. 3. That the occurrence of hyperpyrexia in rheumatism is practically confined to cases of this disease in persons over fourteen years of age. 4. That the rare instances of hyperpyrexia which occur under that age are in cases of rheumatism which present the adult type of the disease. 5. That the absence of hyperpyrexia from rheumatism in children is probably to be explained as the result of the type rheumatism assumes in them rather than a mere question of the age of the sufferer. 6. That males show a much greater proclivity to the condition than females, which may possibly be associated with the greater strain habitually put upon their thermotaxic mechanism. 7. That the condition is most apt to occur in 'first attacks' of rheumatism. 8. That persons who have once suffered from the condition would probably be apt to have a recurrence of it in any subsequent attack of the disease (although no case of such recurrence has previously been published). 9. That it may occur at any stage in an attack of rheumatism, but probably the second week is the most common period of its occurrence. 10. That it may arise in even mild cases of rheumatism, severe rheumatic symptoms being necessary for its occurrence. 11. That the onset of hyperpyrexia is always gradual, without warning, has usually a maximum duration of the

chief of which is delirium. 12. That cases of true rheumatism showing persistence of the pyrexia, in spite of full doses of the salicyl compounds, should be most carefully watched, since hyperpyrexia frequently ensues in such instances. 13. That sudden cessation of the articular pains without coincident fall of temperature should lead to the suspicion of hyperpyrexia, especially if attended also by the cessation of sweating. 14. That MacLagan's hypothesis that hyperpyrexia is due to paresis of the heat-inhibiting mechanism from exhaustion in its attempt to control the excessive heat production of rheumatism, is the most feasible theory yet put forward in explanation of the condition, satisfactorily accounting for the more frequent occurrence of hyperpyrexia in adults than in children. 15. That the absence of rheumatic hyperpyrexia in children is a strong argument against the view that this condition is due to visceral complications, since it is especially in children that these visceral manifestations occur, and it is just in those cases that hyperpyrexia is not found. 16. That in view of the resemblance in several respects between rheumatic hyperpyrexia and 'diabetic coma,' further investigation of this subject might possibly throw fresh light upon the pathogenesis of both conditions. 17. That while the mortality of rheumatism is only about three per cent., hyperpyrexia is probably one of the most important immediate causes of death in this disease. 18. That the mortality of hyperpyretic cases is very high, probably over fifty per cent., but statistics are very variable because—19. The mortality is greater the higher the temperature before treatment is begun; and 20. It is also greater among cases treated by means of antipyretic drugs alone. 21. That treatment by the application of cold in one of its various forms is the only justifiable method in cases of hyperpyrexia in rheumatism. 22. That this should be adopted even in cases apparently moribund, and even although visceral complications may be present. 23. That while there may possibly be some risk of congestion of internal organs as a result of this method of treatment, this does not justify the neglect of what is practically the only remedy for an otherwise fatal condition. 24. That the greatest care should be taken to prevent collapse ensuing in the patient as a result of the treatment by cold, which should be stopped entirely before the treatment falls to normal. 25. That antipyretic drugs, while practically useless in the treatment of hyperpyrexia when present, may perhaps be of some service in preventing a recurrence of this after the temperature has once been reduced by means of cold. 26. That in obstinate cases of recurrent hyperpyrexia the method of treatment by 'disintoxication of the blood' adopted by Barré may probably be of service as an adjunct to the treatment by means of cold. 27. That a greater attention should be paid to the prophylaxis of rheumatic hyperpyrexia, and that more prominence should be given to the advantage of commencing treatment by cold at an early stage before excessive temperatures are attained; in other words, the general condition of the patient, rather than the mere height of his temperature, should be the determining factor for commencing the treatment by cold. 28. That early and complete subjection of the patient to antirheumatic treatment would probably have some influence in preventing the occurrence of hyperpyrexia."

The Bearing of Obesity on Health. Dr G. A. Heron (*Medical Examiner*, February), in a paper on *Some Extra Ratings of Healthy Lives*, read before the Life Assur-

ance Medical Officers' Association, London, speaking of the risk of obesity, says:

"Many stout people are healthy; but some stout people fall into obesity. Although I have searched for it, I have hitherto failed to find a good definition of the physical conditions which stamp a seemingly healthy man as too fat for health. There is, however, a well-known type of man of whom we may say, with much confidence, he will become unhealthily stout. Such men are, in early adult life, noticeable for their large, well-developed bones and muscles. They are full of the joy of living, and keenly alive to pleasures of the senses. Their appetites are large, and their powers of digestion excellent. But when we examine a person of this type, and find him healthy, and, but for the fact that he is increasing in weight and is too heavy for his height and age, would pass him as a first-class life, we should then inquire very carefully about such a man's family history; for it is certain obesity 'runs in families,' as the phrase goes. It is also certain that persons of this type, with an hereditary tendency to obesity, are much less frequently cured of their fatness than are people like in build to them, but without a family history of obesity. Now these sufferers from too redundant fat have for centuries been recognized by medical authorities, and other observant people, as being peculiarly unfitted to resist onsets of acute diseases, as being apt to be short-lived, and as being liable to sudden death. They are likely to die of those degenerations of arteries, muscles, and internal organs which we know are dangers threatening the life of the fat man. Men of this type, and with a family history of obesity, are prone to be too stout in infancy, and up to the time of puberty. If this additional fact can be elicited concerning a proposer of this kind, it ought to make us insist strongly upon an extra rating. But here, again, we have no reliable statistics to guide us in coming to a decision as to the amount of extra rating necessary. Therefore, each medical officer must do as he thinks right. For my own part, had I to deal with a proposer who seemed healthy, but was too heavy for his height and age, whose weight was increasing, who had been too stout between infancy and near to the time of puberty, and who had a family history of obesity, I should advise, for assurance purposes, an addition of fifteen years to the seemingly healthy man's age, or the equivalent of this in the shape of an endowment policy."

"Now, as to the man who has no family history of obesity, and who in early boyhood was not too stout. He may look the very picture of redundant health, a big, powerful man, bristling of energy. The only flaw is, he is too heavy, and his weight is increasing. We know this flaw in such a man is the expression of a threatened departure from health; and it is, almost always, curable in those who have no family history of obesity, and who will submit themselves to necessary treatment in early adult life, when the first threatening of coming obesity usually shows itself. It does not seem fair that this man should be rated on the same scale as the other type of stout man, just now mentioned. The former is clearly a much better life than the latter, and should, I think, have the offer of an endowment policy payable at the age of sixty years. For the reasons mentioned I venture to advise the use of the endowment plan, until we have a reliable statistical table for the regulation of extra ratings in these cases."

"When women are threatened with obesity they should, I think, be rated as men are."

"The too fat man who wishes to assure his life to the best advantage to himself should select for his purpose an office of good standing which has stout men among its directors."

Fœtus in the Abdomen of a Man.—The *Western Druggist* for February says that a peculiar case of heterogeneous fetation has been reported to the Paris Academy of Medicine: A young man was operated upon for what was supposed to be a large abdominal tumor. It proved, however, to be a dermoid cyst, containing a female fœtus as large as is usual at five months. The ovum in the cyst had probably lain latent until puberty or some traumatism had started it to grow. The young man did not long survive the operation, and died ignorant of the existence of a little sister in his supposed tumor.

Aneson, a New Anæsthetic.—According to the *Western Druggist* for February, Sternberg reports in the *Klinisch-therapeutische Wochenschrift* on a new anæsthetic named aneson, which he considers a useful and safe substitute for cocaine. It is a colorless, aqueous solution of trichlor-pseudo-butyl-alcohol, or acetone-chloroform, and corresponds to a 2 to 2.5 per cent. solution of cocaine, but has none of the latter's local irritation and is nontoxic. As much as seventeen grammes have been used without after-effects. The anæsthetic effect is also immediate, with no interval, as with cocaine. In suturing, a small amount of aneson injected at the points where the stitches are to be taken will prevent pain. Even inflammatory phlegmonous processes can be rendered perfectly insensible if sufficient aneson is used to keep them flooded all the time.

Zinc Sulphate in Chronic Gastric Catarrh.—According to Mercè's *Archives* for February, Caporali (*Journal of the American Medical Association*, January 21st) has treated certain cases of chronic gastric catarrh attended by an excessive flow of mucus by irrigating with weak solutions of zinc sulphate. Four cases are mentioned wherein the results were highly satisfactory. These patients had suffered for more than a year (in one instance four years) with epigastric pain, anorexia, eructations, and vomiting. The fluid withdrawn from their stomachs after a test meal contained little or no free hydrochloric acid or organic acids, but was loaded with glairy mucus. At first a solution containing one and a half to three grains of zinc sulphate to a quart of water was used, then with each washing out the proportion of this salt was augmented by three quarters of a grain, arriving finally at a dose of from eight and a half to twelve grains to the quart. Lavage was carried out with the stomach completely empty, and was immediately followed by irrigation with a two- or three-per-cent. solution of sodium bicarbonate, the object being to convert any slight quantity of zinc sulphate remaining in the stomach into zinc carbonate—an innocuous substance. Lavage with zinc sulphate conducted in this manner every day or on alternate days was always well borne by the patient and exercised a really curative action on the gastric catarrh, as manifested by a rapid diminution, and finally the disappearance, of all morbid symptoms and progressive increase in the patient's weight. The cure was maintained.

The Responsibility for the Care of Illegitimate Children.—The *Cincinnati Lancet-Clinic* for February 18th, quoting the *St. Paul Medical Journal*, says that a step

in the right direction has been taken in Germany that might be adopted with advantage in this country. Under a recent enactment, which goes into effect in 1900, the person or persons who have cohabited with the mother of an illegitimate child are made responsible for its support, and required to pay a certain sum annually for its maintenance, until the age of fourteen years. The time of cohabitation is fixed between the one hundred and eighty-second and the three hundred and second day. This law has no reference to the vexed question as to who is the father of the child, but casts the burden very properly upon all those who may have been proved to have had intercourse with the woman within the normal period of gestation. If there be more than one, the burden is divided between them. The mother retains possession of the child, which, however, may be adopted by the man if he so desires, without the obligation of marrying the mother. Such legislation is of evident value in throwing the responsibility of support where it belongs, and of destroying the most active incentive to infanticide.

The "Independent Medical College of Chicago."

In our issue for December 31, 1898, we quoted a paragraph from the *Indian Medical Record* for November concerning the Independent Medical College of Chicago, and expressed our curiosity to know what this institution was. The *Western Druggist* for February gratifies our curiosity, and we reproduce its description for the benefit of our readers. The *Western Druggist* says:

"For the enlightenment of our esteemed contemporaries it may be stated that the Independent Medical College of Chicago is a 'fake' pure and simple, not worthy even of being designated a 'diploma mill,' for it has no 'mill' attachment to give it the suggestion of an appearance of a teaching institution. This affair is a disgrace to the city of Chicago and State of Illinois which the authorities have striven in vain for several years to suppress.

"The persons principally interested in this 'college' are James Armstrong and Charles M. Hovey, and their address is corner of W. Vanburen and S. Leavitt Streets. They have neither school room, nor classes, nor lecturers. Any one, on the payment of a sum agreed upon—ranging from twenty-five to fifty dollars—can receive a doctor's diploma upon answering a few innocent questions put by the 'dean' to 'satisfy' him as to the 'competency' of the candidate; the same valuable (to the peddler's) diploma is also granted, 'soberly' on the applicant's filing in and paying a question of blank, the 'faculty' judging of the correctness of these answers. Formerly these fellows, known locally as the 'Armstrong crowd,' conducted their nefarious business under the title of 'The Illinois Health University,' doing a flourishing business all over the country. For some years of health, after some difficulty, succeeded in procuring a charter, which was regular enough, except that immediately thereafter these same men, now called under the new name of the Independent Medical College, and continued business at the old stand, the institution again being threatened by the law. Armstrong and Company have now obtained a 'National International University,' and under the present State charter law there is nothing to prevent them from selling the license. Then the old game of hide-and-seek will begin all over again."

The Death of Sir John Struthers, M. D.—The death is reported from London of Sir John Struthers, vice-

president of the Royal College of Surgeons of Edinburgh. The deceased physician was born in 1823. At the time of his death he was examiner in anatomy at the Royal College of Surgeons of Edinburgh. He had also held the appointments of lecturer on anatomy at the University of Edinburgh, surgeon to the Edinburgh Royal Infirmary, professor of anatomy at the University of Aberdeen, and was, moreover, a member of the British General Medical Council. He was the author of several anatomical works.

The Physician's Code of Ethics not Narrow or Antiquated.—This was the title of the inaugural address of the president of the New York County Medical Association, Dr. Frederick Holme Wiggin, delivered February 20th, at the Mott Memorial Hall.

Dr. Wiggin said he embraced the opportunity to enlighten both physicians and the laity more fully regarding certain portions of the national code of medical ethics about which there seemed to be much misapprehension. He began by disavowing the slightest intention of stirring up old strifes, and stated that he had selected this special topic solely because, in his intercourse, not only with his professional brethren but with various men of affairs, he had been impressed with the fact that certain very important parts of this subject were quite generally misunderstood. For instance, only a few months ago a high official in the Homœopathic Medical Society of the State of New York had told him that when the American Medical Association and its affiliated societies were ready to open their doors to those who held different views from those of the majority as to the action and doses of drugs, he, for one, would be willing to leave his organization, discard his sectarian title, and apply for membership. This gentleman, like many others, was not aware that years ago the American Medical Association had taken this very position.

In spite of all that had been said since regarding the code of medical ethics, the members of the medical profession in this country had lived under it in reasonable harmony from the organization of the American Medical Association in 1848 until 1882. In the latter year the first note of discord had been struck by the Medical Society of the State of New York, which, at its annual meeting in Albany, had adopted a different code. As this was in direct violation of one of the by-laws of the national organization, the judicial council of the latter society, by a unanimous vote, excluded the New York delegation. As a result, the members of the profession residing in this State who still desired representation in the national body were constrained to organize the New York State Medical Association and the New York County Medical Association. This division of the profession, with its resulting dissensions, was especially unfortunate because it arose from a misunderstanding, and was, therefore, wholly unnecessary. The American Medical Association had endeavored to clear up any doubt upon the main question at issue, that of consultations with homœopathic practitioners, by adopting in May, 1881, a series of resolutions making clear the fact that the national code contained no provision in any wise inconsistent with the broadest dictates of humanity and the exercise of the most perfect liberty of individual opinion and practice, and that the true ground for declining professional fellowship with any class of practitioner was not their belief in any particular doctrine, but their adoption of sectarian names as trade marks, and the formation of organizations antagonistic to the great mass of the medical profession.

This action of the national body, Dr. Wiggin said, had certainly opened the door years ago for the return to the parent organization of the members of the New York State and county societies, and that the members of the county society now appreciated this fact, and occupied identically the same position, was evident from the inaugural address, in 1897, of its president, Dr. Arthur M. Jacobus, who, in speaking of certain sectarian practitioners, said: "If they will but drop the sectarian title for that of physician, pure and simple, and let the old and new school questions die out, I am sure we will welcome them with open arms."

In closing his address, Dr. Wiggin said that, although the local profession might be compelled to wander a few years longer in the desert of disorganization, it was fair to predict that early in the twentieth century a Moses would be found who would lead the profession into the promised land of union and strength. When that glad time should arrive when all educated physicians in this State would join hands, he hoped the larger and reorganized society would adopt as its motto a paraphrase of that of the famous Musketeers of Dumas: "The profession for the individual practitioner, and the individual practitioner for the profession."

A Fire in a Philadelphia Drug House.—A very destructive fire recently broke out in the establishment of Messrs. William R. Warner & Co., compelling the firm to fill orders from their laboratory for the time being.

The German Medical Society of the City of New York will hold its next meeting on Monday evening, March 6th, at 8.15 o'clock. Dr. J. Guttman is to read a paper on *The Use of Holocaine as a Local Anæsthetic in Operations on the Eye, Ear, Nose, and Throat* (to be discussed by Dr. H. Knapp, Dr. J. W. Gleitsmann, Dr. M. Toeplitz, Dr. W. Freundthal, and others); and Dr. Joseph Fränkel is to read a paper on *Syphilis and Facial Paralysis*.

The New York Academy of Medicine.—At a stated meeting, on Thursday evening, the 2d inst., a discussion on syphilis was opened, during which the following papers were presented: *The Treatment of Syphilis in its Early Stages*, by Dr. R. W. Taylor and Dr. L. Bolton Bangs; *The Differential Diagnosis of Syphilitic Eruptions and Signs in the Skin of Former Syphilis*, by Dr. George H. Fox; and *The Stigmata of Syphilis in Children*, by Dr. R. H. M. Pawbarn.

At a special meeting, to be held on Thursday evening, the 9th inst., the following papers will be presented: *Syphilitic Affections of the Heart and Lungs*, by Dr. Leonard Weber; *Syphilitic Affections of the Liver in Adults and in Children*, by Dr. J. George Adami, of Montreal; *Visceral Syphilis in Children*, by Dr. A. Jacobi; *Syphilis in Relation to Obstetrics*, by Dr. Egbert H. Grandin.

At a stated meeting, to be held on Thursday evening, the 16th inst., the following papers will be read: *Some Surgical Aspects of Syphilis*, by Dr. Frank Hartley; *Syphilitic Dementia and Paretic Dementia, and the Treatment of Syphilis of the Nervous System*, by Dr. C. K. Mills, of Philadelphia; *Syphilitic Affections of the Spinal Cord*, by Dr. B. Sachs; *The Ophthalmological Aspects of Syphilis*, by Dr. C. S. Bull; and *Syphilitic Affections of the Respiratory Passages*, by Dr. Francke H. Bosworth.

Original Communications.

A STUDY OF THE NATURAL HISTORY
OF THE CLINICAL MANIFESTATIONS AND
PATHOLOGICAL CHANGES IN
DISEASE OF THE LUNGS AMONG THE INSANE.

By H. A. TOMLINSON, M. D.,

SUPERINTENDENT ST. PETER STATE HOSPITAL, ST. PETER, MINN.

IN the *International Medical Journal* for March, 1895, I published a paper giving the results obtained from the study of the degenerative and destructive diseases of the lungs among the insane in this hospital. Since that time the study has been continued with even more care and elaboration, and special attention has been given to the clinical manifestations and natural history of the pathological changes which mark the course of these degenerative and destructive processes. As a result of this more careful study, we have found that these changes are not confined to those cases in which the apparent cause of death has been phthisis, but that sometimes quite marked destructive change has been going on in the parenchyma of the lung in cases showing a very different clinical picture, in which the immediate cause of death has been some other organic or general disease.

Since January, 1895, there have been a hundred and sixty-seven deaths, of which fifty have been recorded as due to phthisis in some of its forms. Out of this number a necropsy has been made in seventy-two cases, and of this number studied post mortem twenty-four were cases of phthisis, while the rest represented different forms of organic and general disease. However, in none of the cases studied was there complete freedom from lung involvement, while in some of the cases in which death was due to nephritis the progress of degeneration was as great as in the well-defined case of pulmonary tu-

tuberculosis. During the year 1895 and a part of 1896 we had very little tuberculosis in the hospital; but in the fall of 1896 there was a marked increase in the number of cases, and the illness of our herdsman from acute tuberculous infection, as well as the death of a patient from tuberculosis who was one of those working in the cow barn, led to the examination of our herd, with the result of finding half of the herd infected with tuberculosis.

The increase in the number of deaths from this cause went on until the warm weather enabled us to get our patients out of doors, in spite of the fact that all the milk from the infected and suspicious cows was boiled before using and the unsound cattle isolated. Another cause for the increase of tuberculous infection during the past two years has been the great overcrowding of the institution. This, in connection with the fact that the buildings are old, ill ventilated, and poorly constructed from a sanitary standpoint, has made infection much more common than it would be in a new or better constructed set of buildings. During the time covered by this study we have not had a single case of tuberculosis at the time of admission to the hospital, all of the patients being either primary degenerates, a year or more in residence, or else terminal demented who had been in the hospital a number of years. The nationality of those dying of phthisis was distributed as follows: Scandinavian, seventeen; Irish, thirteen; German, ten; American, seven; French, two; Polish, one. So far as could be found out, none of the patients dying of phthisis during this period had a heredity of tuberculous disease, although there may have been a collateral or preparental history, as our hospital population is largely made up of people who have been in America during one generation only.

Since January 1, 1895, seventy-two post-mortem examinations have been made, and in the following table will be found the cause of death and the condition of the lungs in these cases. I wish also to note here that in

Morbid Anatomy of Lung Tissue.

Cause of death in seventy-two cases coming to post-mortem examination from January 1, 1905, to June 1, 1905	No. of cases	One lung	Both lungs	In case of Strunk, don't count in both	Strunk without emphysema	Strunk with emphysema	Notifiable with emphysema	Notifiable without emphysema	Total with emphysema	Total without emphysema	Total
Cerebral tumor	1		1			1					1
Cerebral embolus	2		2			1					1
Cerebral syphilis	1		1	1							1
Cerebral hemorrhage	1		1			1					1
Menigitis	1		1	1							1
Asphyxia	9		9								9
Hepatic abscess	1		1	1							1
Empyema	1		1							1	1
Typhoid fever	1		1			1					1
Mammary carcinoma	1		1			1					1
Sarcomatous	1		1							1	1
Pulmonary edema	1		1			1					1
Broncho pneumonia	2		2								2
Lobar pneumonia	6	1	5	5			1	1	1	1	6
Fibroid phthisis	2	1	1			1					1
Pulmonary tuberculosis	22	1	21	1			1	1	18	1	19
Chronic nephritis	22	1	21	10	5	2	5	5		5	10
General atrophy	1		1	1							1

all of these cases a proportionate degenerative change had taken place in the other vegetative organs and the brain, being most marked in the kidneys; the spleen and the liver following in the order named.

From the fact that none of these cases were recent, it will be seen that the degenerative process must have been ingrafted upon some preexisting condition rendering the pulmonary tissue susceptible to infection by the tubercle bacillus and the pus-forming bacteria. It will also be noted that destruction of lung tissue was almost as frequent in those dying from renal inadequacy as in the cases in which the progressive asphyxia due to respiratory failure was the cause, and that in all the cases examined post mortem some degree of degenerative change had taken place in the lung tissue; although at no time were the physical signs conspicuous enough to attract attention from the other diseased conditions present, while, so far as we could determine from the clinical progress of the cases, the destructive change in the lungs became apparent only after the vitality of the patient had been materially reduced by preexisting general disease or organic change in some other form. Again, even in those cases in which there was no destruction of lung tissue, there was marked increase in the density of the lung, which under the microscope proved to be the result of connective-tissue hyperplasia, and this increased density was always in proportion to a similar degenerative change going on in the other vegetative organs.

In all the cases there were pleural adhesions, varying from slight bands at the apex to complete obliteration of the pleural cavities. The greatest amount of adhesion existed in the chronic tuberculous patients and the least in those dying from general paralysis. In the case of mammary carcinoma one lung was entirely destroyed, while in the case of sarcomatosis both lungs were densely fibroid, with sarcomatous nodules throughout the lungs. The increased density in the lung tissue was most marked in those patients who exhibited the gross stigmata of degeneracy and whose mental condition was the result of defective development, and in these cases the nature of the degenerative change in the lung was further exemplified by the presence of similar changes in the liver, spleen, and kidneys. Furthermore, the character of the degeneration was in constant relation with the degree of defect in the nervous organization of the individual and the amount of degenerative change in the brain.

A singular episode in the clinical history of tuberculous infection among the insane has been the occurrence of a certain number of cases among primary degenerates of an acute illness, with high temperature and great excitation, presenting the physical manifestations of a broncho-pneumonia, accompanied by profuse expectoration, marked digestive disturbance, loss of appetite, and emaciation, the sputa containing numberless tubercle bacilli. The clinical picture resembles what used to be

called "acute catarrhal phthisis." But among the insane in these cases, so far as I have observed them, the bacilli disappear from the sputa, expectoration ceases, and the patient apparently completely recovers. So far none of these patients have died of tuberculosis, and those who died of tuberculosis had no such outbreak as a part of their clinical history.

Another interesting clinical feature has been the absence of extreme emaciation in a large majority of the cases included in this paper, the loss of weight being comparatively slight, while the course of the disease has been, as a rule, greatly prolonged. On the contrary, in those cases in which the onset of the phthisis has been comparatively sudden and its progress rapid, emaciation has been extreme. There is also a marked difference in the temperature range. In the first class of cases the temperature rarely gets beyond 101° F., while in the latter it frequently goes as high as 105° F., and often does not go below 102° F. until a short time before death, when the usual subnormal excursions occur. The subjective symptoms are also more marked in this latter class of cases. Cough is present, with comparatively profuse expectoration, and the course of the disease is more nearly like what it is among the sane. In the cases in which the course of the disease is prolonged, tubercle bacilli are not abundant and sometimes entirely absent, but staphylococci are always present, and often streptococci and pneumococci; while in the rapidly fatal cases tubercle bacilli are always present in abundance, but the pus-forming bacteria are not so common, and often are entirely absent. Pulmonary hemorrhage did not take place in any of the cases included in this report, and in my experience practically never occurs among the insane.

In the class of cases in which the subjective symptoms are absent and emaciation is slight, death usually occurs as the result of renal inadequacy and pulmonary oedema, and the urine as well as the condition of the heart and arteries indicate a chronic interstitial nephritis; while in the more rapidly fatal cases there is a parenchymatous nephritis, sometimes acute, tubercle bacilli often appearing in the urine abundantly. The two following cases illustrate the types described:

M. C., admitted July 30, 1895. Born in Ireland, thirty-six years old, single, a carpenter by trade. A brother of this patient was admitted about two weeks previous, and both were excited at time of admission. Both parents died in middle life from "lung trouble," a brother, aged fifty-nine years, from "*la grippe*," and a sister, at thirty-five years, after confinement. The patient was healthy as a child, but after he reached adult life suffered from chronic constipation and "kidney disease." About three years previous to coming to the hospital he fell and hurt his head. Since that time he occasionally suffered from pain in the back of his head and neck. This pain was more severe after his mental disturbance began. When admitted he had difficulty in passing his urine and was constipated. He also had a varicocele, numerous dilated veins over the surface of

the lower extremities, and suffered from internal hemorrhoids. He improved rapidly, both physically and mentally, and with his brother left the hospital August 31, 1895.

June 29, 1896, the brothers were readmitted. M. being very much depressed, while the other was exalted. This time he was in very bad physical condition, poorly nourished, and the respiratory sounds were harsh over the apices of both lungs. The urine contained albumin, but no casts. He improved physically but steadily deteriorated mentally, and was persistently depressed, indifferent, and without disposition to occupy himself.

In January, 1897, he began to lose in weight; his appetite became capricious, but his physical condition remained fair, and during the summer he improved and became fairly active. October 14th he was put in bed. There was some elevation of temperature. Respiration and pulse accelerated, and he complained of pain in the chest. There were no definite physical signs present, although there was a harsh respiratory sound over both lungs generally. He improved rapidly and was out of bed in a short time. Temperature normal, appetite and physical condition good.

November 29th he again went to bed, complaining of chills and diarrhoea. He had some cough at night. Temperature, 101° F. The physical examination at this time showed defective resonance over both apices. Sibilant and sonorous râles and breathing high pitched at the bases of both lungs. The sputum contained streptococci and numerous tubercle bacilli. The condition of the lungs became rapidly worse. Diarrhoea developed and tubercle bacilli were found in the feces and urine. A cavity was found in the left upper lobe. The diarrhoea continued. The urine contained both albumin and casts. He failed steadily in weight and strength; the temperature went up to 104° and 105° F., and never got below 102° F. Tubercle bacilli were abundant, and the pus-forming bacteria, especially staphylococci, were present for some time before his death. He died January 24, 1898. A post-mortem could not be obtained.

The brother is living, robust and vigorous; but there is some change in his arteries, and eventually he will die of nephritis.

T. M., admitted April 8, 1890, aged twenty-one years; nativity, Poland; occupation, lumberman. He was a stranger and no information could be obtained concerning his family or personal history, except that he was and had been an inebriate; markedly peculiar and erratic in his conduct always. He was found in a "root cellar," where he had secluded himself for some time, living on the vegetables stored there. He had auditory and visual hallucination, was a victim of religious, with expansive ideas concerning his relations with the Deity, and a marked disposition toward seduction. When in the presence of others he was suspicious, sullen, and irritable, occasionally disposed to be violent.

Examination on admission showed the patient to be in poor physical condition, his vitality very much lowered, and the circulation quite feeble. He improved physically after coming to the hospital, but continued to deteriorate mentally, until within a short time he was stupid, filthy, entirely indifferent to his surroundings, requiring constant personal care. Afterward he became more active, but continued to grow more confused mentally; became entirely demented within the first year of his hospital residence.

There was no material change in his condition until the fall of 1896, when he became more stupid, lost his

appetite, and grew weak physically. He was put in bed December 2d, failed rapidly, and died December 12, 1896.

Necropsy: There was some emaciation, and the muscles were flabby from lack of use. The forearms and legs were oedematous. The changes in the brain and its membranes were characteristic of dementia. The cerebro-spinal fluid was sterile.

The pericardial cavity contained forty cubic centimetres of straw-colored fluid and there were numerous fibrous patches on the visceral layer of the pericardium. The fluid contained tubercle bacilli.

The heart weighed two hundred and thirty-four grammes. There was a large deposit of fat about the apex, but the muscle was firm. The valves were competent.

The right pleural cavity contained eighty-five cubic centimetres of fluid. The lung was generally adherent, with the adhesion most marked at the base. It weighed eleven hundred and fifty-three grammes. The whole lung was fibrous, while nodules and small cavities were scattered throughout its substance, except a small fringe of comparatively healthy tissue at the base anteriorly.

The left pleural cavity contained ninety cubic centimetres of fluid. The lung weighed eleven hundred and forty-seven grammes. It was generally adherent, densely fibrous, and filled with nodules and small cavities.

The organs in the abdominal cavity all showed marked degenerative change, with general fibrosis most marked in the liver and kidneys.

Tubercle bacilli were stained in the lung tissue and fluid from the pleural cavities. The tuberculous infection evidently had been comparatively recent in this case, and the destructive change was slight on account of the extreme fibrosis in the lung tissue.

Post mortem, the difference in the conditions present is just as marked as is the clinical difference. In the cases in which the course of the disease has been comparatively rapid, the changes in the lung are characteristic of disintegration, with destructive change in the parenchyma of the lung, and the formation of large abscess cavities. In the slowly developing cases the changes are degenerative, cavities are small, with dense fibrous walls, and these cavities are most common in the lower lobes and toward the exterior of the lung. The lung is heavy, its tissue dense, and the bases often only a mass of tough fibrous tissue, the only tissue at all resembling the normal lung in the middle and anterior portion of the lung. The resemblance between the changes in these cases and the conditions of the lung tissue in bovine tuberculosis is remarkable. The slow degeneration of the lungs of fifty cows, all of which died of their response to the tubercle bacilli, was found in the lung tissues were present all the changes found here, and the only difference being that the cavities were small and not dense as a result of the extreme fibrosis, abscess cavities, and the destruction of the lung tissue being complete. This resemblance is so marked that I have to study the history of the disease in the cow with tuberculosis for evidence of defective nutrition, and that all the cases with the clinical picture of slowly devel-

oping lung disease, without subjective symptoms, emaciation, or much elevation of temperature, occurred among primary degenerates whose insanity began during adolescence and rapidly lapsed into dementia, and whose existence for varying periods of time had been purely vegetative. Among the cases in which the change was destructive and the course of the disease rapid and accompanied by well-defined subjective symptoms, the opposite conditions obtained, and they were generally cases of unstable brain development, giving way under stress of disease or the exigencies of life. They more nearly correspond with the same in the conditions under which the phthisis develops, its progress, and the nature of the changes found post mortem.

In the animals observed by me tuberculosis rarely presented any outward manifestation of the diseased condition. In one case, in which the lungs weighed thirty-eight pounds and were densely fibroid, with an enormous abscess cavity, the animal was sleek and fat, apparently robust, having a hearty appetite, and giving a large quantity of milk. In others the same conditions were present, only in a lesser degree. Even in the mildest cases tuberculous pleurisy was present, with enlarged bronchial glands and fibrosis of the lung, most marked on the exterior, giving to the surface of the lung the appearance of scale armor. Now this same type of degenerative lung disease occurs among the insane, presenting almost identical clinical and pathological conditions.

There are commonly during the progress of the phthisis absence of pain and dyspnoea, little or no cough or expectoration, no hæmorrhage, and very few symptoms referable to the lungs, our attention being first called to the case by weakness, elevation of temperature, and sweating. The course of the disease in this class of cases is very greatly prolonged, as a rule, and even after the patient is put in bed he may continue a merely vegetative existence for periods varying from three months to a year. After death the changes found resemble greatly those resulting in bovine tuberculosis, being only more advanced, and show that the degenerative changes have been greatly prolonged and probably existed a long time before our attention was called to them by the symptoms produced by infection with the pyogenic bacteria. Again, the apparent absence of the distressful symptoms of phthisis in the demented degenerate makes the analogy more complete by showing how mental reduction tends to bring the nervous organization by retrograde change to the level of the type existing in the lower animals; while a corresponding somatic reduction goes on as the result of the establishment of premature senility.

In some instances in which there was markedly defective organization, the morbid anatomy of the lung was the same as that found as the result of senescence.

The following cases illustrate these changes and the resemblance referred to:

P. L., a man, admitted April 11, 1892; nativity, Canada; age, eighty-four years; senile degenerate. When admitted, this patient was in good condition, with the exception of the presence of a double inguinal hernia. Mentally he was confused, with progressive reduction of capacity. There was no variation in his mental condition during the time of his residence, and very little in his physical status, except occasional attacks of infective diarrhoea, from which he always promptly recovered. The arteries were hard, the heart's action irregular and intermittent, and he often complained of vertigo. The last two months he spent in bed, growing progressively weaker. There was a large area of dulness over the lower portion of the right lung and there was some cough. He died April 18, 1895, presenting the usual manifestations of progressive uræmia.

The changes in the brain were those usual in senility, but there was an unusual amount of arteriosclerosis. The pericardial cavity contained eighteen cubic centimetres of cloudy fluid. The heart muscle was soft and flabby, the endocardium thickened. The leaflets of the tricuspid valve were much shrunken, as were the semi-lunar valves, and both contained numerous calcareous deposits. There were calcareous patches scattered over the other valves also. The heart weighed thirteen ounces.

The right pleural cavity contained thirteen hundred cubic centimetres of thin, purulent fluid, and the pleura was much thickened posteriorly and laterally. The left pleura was adherent at the apex, anteriorly, and to the diaphragm. The right lung weighed twenty-one ounces, and its pleural covering was densely thickened at the base anteriorly and posteriorly and there was some hypostatic congestion. The left lung weighed twenty-six ounces. The apex was deformed by scars externally, and there were nodules and small cavities throughout its structure. Both lungs were deformed externally by numerous old cicatrices, and the lung substance was dense and inelastic. The organs in the abdominal cavity all exhibited marked degenerative change and the pyramidal substance in the kidneys was largely replaced by fat.

M. A. B. S., a woman, admitted April 10, 1872; nativity, Switzerland; age at time of death, seventy years; senile degenerate. This patient is said to have always been "weak-minded" and her condition was that of chronic excitement at the time of her admission. During her residence in the hospital she was in good health, as a rule, and mentally she was demented and quiet.

On February 4, 1896, she complained of severe pain in the left side of the chest. The temperature was elevated from one to two degrees and respiration was accelerated. On the next day a well-marked pneumonia, involving the lower lobe of the left lung and associated with pleurisy, was made out. The patient's strength failed rapidly and she died on February 8th.

The changes in the brain were those characteristic of dementia. The pericardial cavity contained fifteen cubic centimetres of sanguineo-purulent fluid. The heart weighed fourteen ounces. The muscle was thickly covered with fat. The valves were competent. The right ventricle contained a partially organized clot. The left pleural cavity contained a hundred cubic centimetres of fluid, and the lung weighed thirty-five ounces and was universally adherent. The adhesions were old and firmly organized at the apex, but recent over the middle portion and the lower lobe. There was a fibrous exudate over the whole of the lower lobe, more abundant ante-

riorly, and this exudate could be peeled off in sheets. The lung was dense and solid at the apex, where there were some tubercles. The lower lobe was solid throughout. The right pleural cavity contained no fluid. The lung weighed seventeen ounces and was almost universally adherent. The anterior margins were crepitant, but the posterior portions of both lobes were in a condition of hypostatic congestion. The density of both lungs was markedly increased.

The abdominal organs were shrunken and fibrous. The kidneys were very much degenerated, and the pyramidal substance replaced by fat to a large extent. The bladder was empty. *Staphylococci*, *streptococci*, *Bacillus pyocyaneus*, and Fraenkel's pneumococcus were found in the pleural and pericardial fluid, the pneumococcus largely predominating. No tubercle bacilli were found.

T. M., a man; admitted April 8, 1890; nativity, Poland; age at time of death, twenty-six years; a primary degenerate. When admitted, the patient was in poor physical condition on account of exposure and want of food. He was self-depreciative and the victim of religiosity when admitted, but rapidly became demented and stupid. During the last three years he degenerated physically as well as mentally, was put to bed December 2d, and died December 12, 1896. The changes in the brain were those characteristic of dementia. The pericardial cavity contained forty cubic centimetres of fluid, and there were numerous white patches on the visceral surface. The heart weighed seven ounces and a half. There was a large deposit of fat at the apex. The muscle was firm and the valves were competent.

The right pleural cavity contained eighty-five cubic centimetres of fluid. The lung weighed thirty-seven ounces and a half. At the apex there were numerous small cavities, and throughout the lung there were nodules and cavities. The left pleural cavity contained ninety cubic centimetres of fluid. The lung weighed thirty-seven ounces. It was adherent antero-posteriorly. There was a cavity the size of a walnut in the apex and a smaller cavity in the axillary line. This lung was almost entirely solidified and filled with nodules and small cavities. The tissue of the lung was densely fibrous and inelastic. There were tubercle bacilli in the pleural but not in the pericardial fluid. They were also present in the lungs.

The organs in the abdominal cavity showed marked degenerative change with fibrous increase. The kidneys were increased in weight, their capsules adherent, and the cortex much thickened. The mesenteric glands were enlarged, and numerous ulcers existed in the intestine.

A. R., a woman; admitted November 24, 1886; nativity, Sweden; age at time of death, thirty years; primary degenerate. When admitted, the patient had been in sane for two years, and was a victim of sexual excitement. She passed gradually into dementia, becoming stupid and filthy. Her physical condition was fair. In December, 1893, physical signs of tuberculosis became apparent. There was a prolonged remission and one short exacerbation of the disease between this time and March 5, 1895, when the patient went to bed very much prostrated, with profuse expectoration. Tubercle bacilli were found in abundance. She grew steadily weaker, with well marked physical signs, and died April 11, 1895. The changes found in the brain were those of dementia. The pericardial cavity contained twenty-four cubic centimetres of slightly opaque fluid. The heart weighed eight ounces. The aortic valves were incom-

petent, owing to retraction of the leaflets. The leaflets of the other valves were slightly thickened. The mediastinal and bronchial glands were enlarged. In the right pleural cavity there were old and firm adhesions over the upper half of the lung. The lung weighed twenty-eight ounces, and there were nodules and cavities throughout. The lung was a dense fibrous mass, except at the margins anteriorly. The left pleural cavity was almost obliterated. The lung weighed nineteen ounces, and there was cloudy fluid in the numerous cystic cavities formed by the adhesions. The apex of the lung contained a cavity as large as a goose egg, and there were nodules and numerous small cavities throughout the lung. The intervening tissue was a dense fibrous mass. The organs in the abdominal cavity were undergoing progressive degeneration. The kidneys were small, lobulated, but not markedly degenerated.

It has often been a matter of marvel to me, in examining the lungs of some of our patients, how they manage to live so long when there is apparently nothing but the anterior margins of the lobes of the lungs left for them to breathe with.

All variations between the types described are found, as can be seen by referring to the table, and it will be noted that almost as many changes are found in the lungs of those patients who die of nephritis as among those who die of tuberculosis.

Another matter of clinical interest is the fact that the phthisis often exists for a long time before the tubercle bacilli can be found in the sputum, and in some of the cases in which there are well-developed physical signs of phthisis the patients die of intercurrent disease, and show well-marked fibroid change in the lung, but no cavities of tubercle bacilli. In all the cases in which abscess cavities were found, some form of pus-producing bacteria were always present, the most common being the *Staphylococci pyogenes aureus* or *albus*, and Fraenkel's pneumococcus.

To recapitulate: Phthisis among the insane is, in old institutions like the hospital at St. Peter, a proportionately more common cause of death than in general practice outside of the large cities. The death-rate for the last year of the period included in this paper, from this cause, was thirty-two, which is forty-six per cent. of the number of deaths for the year. The disease is most common among primary defectives of the connective-tissue type, to which most epileptics and so-called cases of adolescent insanity belong. After these it attacks most frequently senile cases.

Now, taking into consideration the fact that all patients are practically subjected to the same conditions, all equally exposed to the same sources of infection, why is it that only a certain number of them die of phthisis? A study of the family and life history of those patients who have died of phthisis in this hospital shows that in none of the cases was there any evidence of lung disease at the time of admission to the hospital, or in the family, except that which was concurrent in the same generation. This same result was obtained by me in a

statistical study made in another connection, Insanity and Phthisis, their Transmutation, Concurrence, and Coexistence (*Journal of Nervous and Mental Disease*, October, 1895).

Meigs, in his recently published work on *The Origin of Disease*, says in the chapter on the lungs: "Extensive emphysema and fibrosis or vascular disease may often be found in the bodies of persons who had suffered no attack of sickness while these degenerative conditions had been progressing, but had enjoyed sufficiently good health to be able unimpeded to pursue their ordinary vocations."

In my own experience this is especially true in the bodies of those who have passed middle life. But among the insane I have found these degenerative changes in all defectives, including epileptics, without regard to the period of life, and it is in this class of patients, reaching adult and middle life, that we find such marked destructive and degenerative change in the lungs, where the cause of death has been other than phthisis. Indeed, there is no one thing so characteristic of the somatic changes accompanying degeneration as the excessive formation of connective tissue. I look upon this tendency toward the excessive formation of connective tissue as the manifestation of inherent defect in the structure of the organism, whereby its potentiality is limited, and the conditions of senility occur prematurely as a result, the variation in different individuals being due to the degree of defect and nature of the environment. I have found two general types of defective or unstable structure—the one represented by excessive connective or structural tissue formation and correspondingly imperfect functional development; the other by excessive functional development, with marked instability and the tendency to react extremely to slight stimuli. This type is represented in its most exaggerated form by the children who have convulsions from apparently trivial causes; who are constantly liable to extreme reaction from slight sources of irritation of the respiratory or digestive tract; who show marked signs of instability during the period of second dentition, and, at puberty or during adolescence, die of acute phthisis; who have hysterical outbursts, or become suddenly insane and as suddenly recover. We see this type only very rarely among the patients admitted to this hospital, and they usually recover; so that opportunity for post-mortem study of the nature of the changes in the brain, heart, lungs, and abdominal viscera does not come often. In the cases examined we have found the changes to be very different, and in some cases exactly the opposite of those found in the connective-tissue type. The brain is shrunken and microscopically shows marked disintegration of the cortical cells, without material increase of neuroglial tissue; the organs of the body are small, with destructive or atrophic change, according to the cause of death, the blood-vessels showing destruction of the intima and muscular coat, with only apparent increase of fibrous tissue. The connective-tissue type has been sufficiently

described in the body of the paper, and the case records indicate the nature of the changes found. Of course, these types tend to overlap and run into each other, and are seldom absolutely clearly defined except in childhood and during adolescence. Three such cases were reported by me in the paper before referred to, two being children who died of tuberculous meningitis, the other a young girl who died of miliary tuberculosis. The bulk of our patients belong to the connective-tissue type; the connective-tissue cell, being of a lower order of development than the epithelial or functional cell, would necessarily dominate the structure of a defective organism.

The conclusion I have come to from a careful study of the morbid anatomy of the lungs and abdominal viscera of the insane is that fibrosis is always present in some degree; greatest in the primarily defective, least in the unstable class. In the largest number fibrosis is greatest in the kidney, next in the lungs; the heart being least involved, and for obvious reasons. So far as our records show, all patients who do not die of cerebral hæmorrhage or the acute illnesses of hospital life have for the cause of death pulmonary phthisis or nephritis. In all the cases of nephritis there is more or less degenerative and destructive change in the lungs, and where phthisis is the cause of death the kidneys are also involved. When the habits and mode of life of the average chronic insane patient are considered—the tendency to eat voraciously and take very little exercise, the enforced idleness during the winter, with overcrowding and poor ventilation—it is not surprising that the lungs and kidneys should show the greatest amount of degenerative change; and the converse of this is shown by the good health and freedom from lung disease or degenerative tissue change among those patients who lead an active outdoor life and are steadily occupied with manual labor. Modern physiology teaches us that any irritation of an organ or part will induce not only a determination of blood, with increase of nutrition and function, but also an actual hyperplasia of the connective-tissue framework of the organ. Now the persistence of the irritation or its increase will easily turn the normal into an abnormal process, and we have a hyperplasia that is pathological; an increase of connective tissue sufficient to interfere with function, and the after contraction of which will be the beginning of the process of degeneration. If we are dealing with a defective organism it is easy to see how much smaller an amount of irritation will be required to set up the degenerative change and how much more rapid and extreme will be the fibrosis resulting from the persistence of the hyperplasia. From this the conclusion follows naturally as to the susceptibility of the insane to disease of the lungs; and the constant presence of the means of infection, coupled with the overcrowding of our large State institutions, explains the facility with which our patients become the victims of phthisis, and why degenerative changes in the lung are found practically in all cases.

ON A POLYMORPHOUS CEREBRAL TUMOR

(ALVEOLAR GLIOMA?)

CONTAINING TUBERCLES AND TUBERCLE BACILLI.

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THE classification of tumors of the brain and its membranes has been considerably modified since the early days when all such neoplasms were referred to one of the two main tumor groups—to the so-called fibrino-plastic or to the cancerous growths. By improved methods of microscopic technique investigators have still further added to our knowledge of the histological structure and the histogenesis of tumors, so that now, in the light of modern research, the classification of brain tumors must be still further remodeled, and the grouping under each class to a certain extent recast.

In the earliest times all tumors were classified according to their clinical symptoms, and types were recognized mainly as benign and malignant. Later their morphological characteristics were made the criteria for diagnosis. Tumors are now named also according to their histogenesis.

With both histogenesis and morphology ascertained, a mistake in diagnosis is scarcely possible, though additional factors are of value in determining the nature of the growth.

Such definite rules for guidance in the diagnosis of tumors would seem to make a definite classification quite possible. But, as will be seen later, the origin of many tumors is difficult to trace, and the morphology is not always typical in itself of the normal type of tissue from which the tumor springs.

In a general way, then, it may be said that a positive diagnosis can be made only:

1. From histogenesis:—(a) where the initial stage of the developing tumor can be certainly traced, or (b) where the periphery of an older growth shows the transition from normal to atypical structure.

2. From morphology:—where the tumor occurs in an organ not normally possessing elements which could give rise to neoplasms of structure similar to each other if, at the same time, it can be shown whether or not the origin was from embryonic misplacement or from metastatic germs.

In other cases an approximate diagnosis may be formed, but a decisive conclusion can not be reached.

It will thus be seen that any classification of brain tumors which can be made must of necessity be more or less faulty, and that a certain number of tumors will always be referred to classes to which they do not properly belong.

The classification of brain tumors, as given in the various text books on pathology, is more or less un-

form. Such tumors are classified according to their points of origin—(1) from the brain substance, and (2) from the meninges, the choroid plexuses, and the ependymal lining of the ventricles.

The tumors of the brain substance are glioma, together with neuro-glioma; sarcoma, including endothelioma, psammoma, glio-sarcoma (?), and various other mixed forms; cholesteatoma, angioma, fibroma, osteoma, lipoma, dermoid cyst, epithelial growths which may have penetrated the cerebral substance from the choroid plexus or the ependymal lining of the ventricles; and secondary growths, such as sarcoma and carcinoma.

The tumors of the meninges, the choroid plexuses, and the ependymal lining of the ventricles include the various forms of sarcoma, of which the endothelioma (alveolar sarcoma) is by far the most frequent variety; psammoma, cholesteatoma, fibroma, lipoma, chondroma, osteoma, carcinoma (?), echondroma, dermoid cysts, and secondary tumors (carcinoma and sarcoma).

Of these neoplasms the glioma group is peculiar to the central nervous system, arising, as it does, from histological elements found normally in the central nervous system only. It, together with the sarcoma group, forms the most common variety of tumor found in the brain.

The other types of cerebral neoplasm are rare. This is especially true of the epithelial group. But while this fact is founded upon experience, it would seem *a priori* most plausible to believe that neoplasms may often arise from the epithelial lining of the choroid plexuses and of the ventricles, as do similar growths from the other epithelia of the body. The literature, however, has shown this not to be the case, since most of the cerebral neoplasms described as carcinoma and epithelioma are shown, both from description and illustration, to belong to the endothelial group. The cases of Eberth* and Arndt† are certainly examples of this latter type of growth. Rokitsansky's‡ case of "carcinoma" is based on insufficient evidence; Walther Selke's§ description was of a papilloma in which he believed it possible for carcinoma to develop; while the only authentic cases of primary epithelial tumor of the brain which I have found in the literature are those of Ziegler, who reported a case of "carcinoma" originating in the choroid plexus of the third ventricle; of Cornil and Ranvier,¶ who reported a case of "carci-

* Eberth—Zur Entwicklung des Epithelioms (Abhandlung aus der Pia und der Lunge). Virchow's Archiv, 1859, 51.

† Arndt—Ein Cerebral-der Papilloma. Virchow's Archiv, 1870, 195.

‡ Rokitsansky—Lehrbuch der path. Anat., 1878, 1, 10.

§ Selke, Walther—Ueber eine epithel. Epitheliom des Cerebrum. Dissertation aus der Königsberg, 1891.

¶ Ziegler—Lehrbuch der path. Anat., 1891, 3, 10, spec. Theil, p. 270.

¶ Cornil and Ranvier—Mémoires de l'Académie de Médecine, 1881, 2, 39.

noma" of the third ventricle which had originated from the ependyma; and a case of von Wunschheim,* in which a primary "carcinoma" of the fourth ventricle was shown to have its origin at the point of transition between the ependymal epithelium and the plexus epithelium.

In view of the general frequency with which glioma and endothelioma occur, and of their possible bearing upon the tumor to be described, the leading characteristics of these two groups may be considered in some detail.

The glioma is by far the most common type of tumor found in the brain, developing, as it does, from the neuroglia. Since the recent researches of Golgi and von Kölliker, and the still later investigations of His, Ramón y Cajal, von Lenhossék, and others, upon the embryology and histology of the normal brain, pathologists have also gained a more intelligible appreciation of abnormal processes. And now, by basing the diagnosis of glioma upon histogenetic as well as upon structural peculiarities, a more ready differentiation of the tumor groups is rendered possible.

It is thus that Stroebe † and other pathologists have applied these facts in their investigations upon glioma and have given a more comprehensive view of the entire subject. By the use of Weigert's and Mallory's differential stains and other improved methods of technique they have added to our knowledge of both the morphology and the histogenesis of glioma. They have shown, at the same time, that many tumors heretofore described as sarcoma, glo-sarcoma, neuro-glioma, etc., are to be included under the simple glioma species.

Stroebe, in his comprehensive monograph, *Ueber Entstehung und Bau der Gehirngliome*, has given a thorough survey of the literature upon glioma from the initial publication of Virchow ‡ up to the time of his own investigation. He has communicated the results of six carefully studied cases of his own, and gives some interesting conclusions. Before going into the details of Stroebe's work upon pathological neuroglia it will be well to consider briefly the prevailing conceptions of normal neuroglia as this tissue is now understood.

The neuroglia is functionally and anatomically the connective tissue of the central nervous system. It was formerly thought to be a mesodermal structure like the other connective tissues of the body, but more recent investigations have shown it to be derived from the ectoderm. In structure it consists of fibres and cells, the fibres being woven into a delicate glistening network, while the cells are small, apparently branched, and are intimately intermingled with the network of fibres. The progenitors of the neuroglia cells are the

embryonic ependymal cells, and probably certain less differentiated elements known as astroblasts. The normal neuroglia thus presents, in the course of its development, mainly three different types of cells—cells of ependymal type; cells of a simple and undifferentiated form, or astroblasts; and the spider and brush cells, or astrocytes.

With regard to the relation of the neuroglia fibre to the neuroglia cell there exists considerable difference of opinion. It was formerly thought that the fibre was a direct protoplasmic outgrowth from the cell body, and Golgi's silver method did much to further this belief. It has since been claimed by Weigert that this relation of fibre to cell holds good only for embryonic forms, while a separation exists in adult cells. This position is made probable by the use of his differential chemical stain, and has been further confirmed by the researches of Mallory and others.

Stroebe, on the other hand, believes that there is insufficient evidence for the acceptance of Weigert's claim, and still adheres to the view of direct continuity of structure for both adult and embryonic forms. And Taylor,* although admitting the "essential correctness" of Weigert's view, takes a position between the two extremes and suggests the existence, even in developed neuroglia, of a certain number of neuroglia elements whose fibres are still in the relation of physical continuity with the cells. His careful researches have led him to conceive of the "evolution of neuroglia from cells without processes to cells with processes, and then to cells whose processes have been completely differentiated into fibres." It is probable that this more conservative position is correct, but that, as Taylor further states, "with all the means at our command the absolute determination of the relation of cells and fibres in individual cases remains difficult and at times impossible."

Stroebe has shown that gliomata of the central nervous system arise from a tissue whose elements take their origin from the neuroglia or from the ependymal cells. In support of this view he cites numerous cases of glioma from the literature; but especially confirmatory is a case of his own in which cavities lined by ciliated cylindrical epithelium were found in the middle of a glioma. In this latter case the pointed extremities of the epithelial-like cells which lined the cavities were drawn out into fine filamentous processes which were intimately interwoven with the surrounding network of neuroglia fibres—all properties analogous to those which belong to the ependymal cells of the ventricles and the neural canal. And because of this analogy Stroebe regards the cavities as abnormal lateral offshoots from the primitive neural canal, which originated in a disturbance of development occurring in the early em-

* Von Wunschheim. Ueber ein Fall primärem Carcinom in der Rautengrube. *Frey med. Woch.*, xvi, 1891, 337.

† Stroebe. Ueber Entstehung und Bau der Gehirngliome. *Ziegler's Beiträge*, xviii, 1895, 105.

‡ Virchow. *Die krankhaften Geschwülste*, Berlin, 1863.

* Taylor. A Contribution to the Study of Human Neuroglia. *Journal of Experimental Medicine*, vol. ii, 1897, p. 611.

bryo. That the cavities were no longer in connection with the ventricle he regards as insignificant, in view of the fact that the offshoots must have become more and more deeply situated as development went on, until they were finally shut off from all communication with the primitive canal.

At the time of Stroebe's publication there was but one other case on record in which a cerebral glioma contained cystlike formations with an incomplete lining of cubical epithelial-like cells. This was a case reported by Buchholz,* and resembled Stroebe's case in all essentials except that here the "epithelium" possessed no cilia.

Since the reports of Buchholz and Stroebe there has appeared in the literature, so far as I can find, but one similar case. This was recently reported by Henneberg,† and concerned a cerebral glioma which contained cavities lined with cylindrical "epithelium." Here, as in the case of Buchholz, the cells possessed no cilia.‡

Curiously enough, these three cases, with almost identical anatomical features and representing the entire literature upon this class of cerebral tumors, have been differently interpreted by each of the three observers. Stroebe, as said, regards his case as the result of embryonic misplacement from the primitive neural canal. Buchholz interprets the "epithelium" in his case as transformed glioma cells which, as the derivatives of glia cells, have an ectodermal origin. These glioma cells, he thinks, under certain conditions, such as pressure, may take on an epithelial-like form. Henneberg attributes the epithelial-lined cavities in his case to the outgrowth of gliomatous excrescences into the lateral ventricle, which, as they progressed outward, had left portions of the ependyma deeply sunk in the tumor. These portions subsequently developed into the cavities described. It is probable that all three cases are representative of the same general pathological condition, and that the theory of embryonic misplacement, advanced by Stroebe and bearing out the Cohnheim hypothesis, may be taken to explain them all.

In further support of this theory of histogenesis are numerous other pathological processes of both brain and cord in which epithelial-lined cavities exist, often still maintaining their connection with the ventricle or the central canal. The cavities in these various processes are not always interpreted as the result of embryonic

misplacement by the observers who reported them, but they seem to us conclusive of this view. Such are the many cases of syringomyelia containing epithelial-lined cysts, and the isolated cases of multiple sclerosis (Borst), teratoid tumor (Saxer), hydrocephalus (Henneberg), granular ependymitis (Aschoff), and other cases in which epithelial-lined cavities are found. The literature on this subject has been carefully collected by Stroebe,* and has been still further augmented by Henneberg.†

The structural peculiarities of glioma vary within very wide limits, including all types of neuroglia tissue, both normal and pathological, and all stages of neuroglia formation from the earliest embryonic to the developed adult forms. But while this variation is in itself a peculiarity of the tumor-forming process, there are yet certain leading characteristics by which the glioma may be known. These characteristics include in a general way (a) the presence of stellate neuroglia cells and (b) a fine meshwork of highly refractile fibres which show in most cases a direct connection with the cells. The cells vary in size and shape. Some of them possess numerous fine, short, filamentous processes. Other have coarse, long fibres that are branched. The fibres may be fine or coarse, and the meshwork which they form is loose or dense.

The gliomata are named for the most part according to the element which predominates. Thus, there are fibrous gliomata and cellular gliomata; there are coarse-fibred tumors and fine-fibred forms. There are types of gliomata according to the variety of cell, from the earliest embryonic form to the large ganglion cell-like (neurogliomatous?) element, and there are types in which all transitional forms are found.

According to this nomenclature one finds gliomata classified as fibrous and cellular (Raymond); as spider-celled glioma and brush-celled glioma (Simon); and by Stroebe as small-celled glioma, large-celled glioma, and giant-celled glioma; as cellular (soft) glioma and fibrous (hard) glioma; as star-celled glioma, spindle-celled glioma, polymorphous-celled glioma, and ganglion-celled glioma; as coarse-fibred glioma and fine-fibred glioma; as dense glioma (hard) and loose glioma (soft); and (according to location) as central glioma, peripheral or superficial glioma, and intermediate glioma.

The most recent contribution to the classification of gliomata has been made by Dr. Flexner.‡ In a paper upon Glia and Gliomatosis, read before the Philadelphia Neurological Society, February 28, 1898, he reported a tumor, heretofore undescribed in the literature, to which he gives the name ependyma-celled glioma. It was composed of cells which resembled the ependymal type of cell found in the human embryonic spinal cord.

* Buchholz. Beitrag zur Kenntniss der Gehirngliome. *Archiv für Psych.*, xvii, 1891.

† Henneberg. Beitrag zur Kenntniss der Gliome. *Archiv für Psychiatrie und Neurokrankh.*, xxi, 1896, 205.

‡ Since the completion of this paper Rosenthal (Ueber eine eigen thümliche, mit Syringomyelie complicirte Geschwulst des Rückenmark. *Ziegler's Beiträge*, xvi, 1898, 111) has alluded to a tumor of the fourth ventricle, of which he has seen a section, the description of which is to be published by Glucksmann. This will make the fourth case of such tumor reported.

* Stroebe. *Op. cit.* † Henneberg. *Op. cit.*
‡ Flexner. Glia and Gliomatosis. *Ph. Journal of Nervous and Mental Disease*, vol. xxv, 1898, p. 106.

Dr. Flexner classifies gliomata according to their correspondence with certain forms or stages of development of neuroglia, and thus recognizes: (1) tumors made up of cells of simple form corresponding with the astroblast; (2) tumors which contain cells of more complex type corresponding with Deiters's cell, or the astrocyte; and (3) tumors composed of cells resembling the early embryonic ependymal forms.

He further adds that although such a tumor has not yet certainly come to his notice, "it is conceivable that the fully developed or adult ependymal cells may also give rise to tumors whose appearance would be different from the several forms already described.*"

The more or less precise description of the structure of glioma, even though broad in its scope, and the recognition of the genesis of glioma from the ectoderm have, as already said, been made the basis of differential diagnosis for the various tumors of the central nervous system.

Stroobe, in his scheme of differentiation between glioma and sarcoma, lays particular stress upon the close relation of the glia fibre to the glia cell, and upon the peculiar, highly refractile, fibrous network found between the cells. In sarcoma these features are wanting, though there may be occasional cells with processes. Stroobe further considers the mode of growth, and finds that glioma invades the brain as a diffuse infiltration, while sarcoma is usually more or less circumscribed, compressing the brain substance, which, however, it does not infiltrate. In glioma the pial membranes are often intact, or are at most but slightly thickened; in sarcoma they are adherent, forming an integral part of the tumor mass. Medullated nerve fibres are found almost invariably in glioma; in sarcoma, when present at all, they are situated in the periphery. Sarcoma is often associated with mucoid degeneration; glioma shows at most an edematous softening. Where the origin can be traced to the glia on the one hand, or to the connective tissue about the blood-vessels or the membranes on the other, there will, of course, be no difficulty in diagnosis.

While this scheme for differentiation is not generally accepted, it is applicable to a large number of cases.

The diagnosis is difficult for those gliomata alone in which the component cells are mainly astroblasts, since these undifferentiated cells have many features in common with the undeveloped cells of the mesoblastic connective tissue. Indeed, it is impossible at times to

distinguish between the astroblastic glioma and the small round-celled sarcoma, and such tumors have often given rise to the anomalous term *glio-sarcoma*.

The question of the existence of a mixed tumor of the nature of *glio-sarcoma* has been sufficiently discussed in the recent literature, and thus demands but a word of mention. Such a nomenclature is conceded by most of the leading pathologists to be scientifically incorrect as applied to a simple form, since the term as now applied would refer to tumors of mixed epiblastic and mesoblastic origin—that is, to those whose structures are derived in part from neuroglia and in part from the connective tissue of the blood-vessels or meninges of the brain. There is, moreover, according to von Lenhossék, no authentic case of *glio-sarcoma* on record.

It is easy to conceive of this misuse of the term in the early days when Virchow first defined glioma. The glia tumors were then believed to be derived from the mesoderm in the same manner as the simple connective-tissue tumors, and morphological features were made the basis of differentiation. At that time there was no sharp border line between glioma and sarcoma. A very cellular glioma was believed to be a transition stage to the medullary sarcoma, and the choice of a name was voluntary. Now that histogenesis is the primary determining factor in diagnosis, it is surprising that such men as Hanseman,* Henneberg,† and Thoma still adhere to the old method of nomenclature.

It has been seen, however, that these difficulties of nomenclature hold good nowadays for only a limited number of cases. Even where the histogenesis can not be traced it is possible by the application of many different stains to bring out the structural peculiarities of the tumor. The very cellular glioma recently described by Taylor,‡ Henneberg's" cases of glioma with sarcomatous degeneration, and possibly the peculiar cellular tumor described by Alice Hamilton|| as "*neuro-glioma*," would all in former times have been referred to the sarcoma group. And, conversely, it may be said that the recent schemes for the separation of glioma and sarcoma, founded as they are upon both histogenetic and structural differences, would refer most of the so-called sarcomata, *glio-sarcomata*, and *neuro-gliomata* heretofore described to the simple glioma group. This is true of almost all very cellular tumors, which are still interpreted as sarcomata when inadequately studied by the older methods alone.

The endothelioma is the form of tumor most often met with in the internal meninges, and next to glioma

* Roenthal, in the paper previously alluded to, has described a tumor under the name of *neuroepithelioma glomatosum microcysticum*, which shows, among other appearances, typical adult ciliated ependymal cells with processes. This tumor is regarded by the author as having originated from the same embryonic structures that give rise to the central nervous system, but under somewhat different conditions, leading to the formation of an adenomelike tumor structure. He finds in support of this view not only adult ependymal cells, but also these same elements in other stages of development.

* Hanseman, *Vorleser über die Histogenese der bösartigen Geschwülste, Die mikroskop. Diagnose der bösartigen Geschwülste*, Berlin, 1897, p. 165.

† Henneberg, *Op. cit.*

‡ Taylor, *Op. cit.*

" Henneberg, *Op. cit.*

|| Thomas, H. M., and Hamilton, Alice. The Clinical Course and Pathological Histology of a Case of Neuro-Glioma of the Brain. *The Journal of Experimental Medicine*, vol. ii, 1897, p. 635.

is the most frequent variety of neoplasm found in the brain. It may be defined as a tumor of alveolar or tubular structure, which takes its origin from the endothelial cells. The alveolar and the tubular structure may be lost in places through a diffuse proliferation of the growth.

This definition of endothelioma would be very simple if there were complete concurrence of opinion as to what constitutes endothelial cells, if the histogenesis of the tumor could be certainly traced from the endothelial cells, and if the structure of the tumor were uniformly tubular or alveolar. But each of these questions has given rise to much discussion. Indeed, the term endothelioma has been the subject of numerous controversies from its first introduction by Golgi down to the present time. Various views as to its significance are still held by competent observers, some even denying the existence of such a growth. Without entering into these discussions it is worth while only to refer to the early work of Golgi, Waldeyer, and Kolaczek, and the more recent work done by Hansemann,* Ribbert,† von Volkmann,‡ Lubarsch,§ and others who have done much to collect the scattered literature. A brief outline of the more tenable theories may be given. Ziegler,|| in the last edition of his text-book on pathology, defines endothelioma as an organoid sarcoma in which groups and strands of cells result from the proliferation of the endothelium lining the lymph spaces and the lymph vessels. In other words, the endothelioma is a lymphangiosarcoma of alveolar or tubular structure. This definition will be seen to differ somewhat from that expressed in the previous editions of Ziegler's work, excluding as it does from the endothelioma group all new growths which arise from the perithelium covering the blood-vessels, and even such tumors as develop from the endothelium lining the blood-vessels and serous cavities themselves. It thus limits the class of endothelioma to a decidedly smaller group.

A broader definition is that of von Volkmann, who includes among the endotheliomata all neoplasms which arise from the developed endothelial cells, whether these line the blood-vessels, the lymph vessels, the lymph spaces, the serous cavities, or whether they form a flat perivascular covering for the blood-vessels. In the brain it will thus be seen that the endothelioma develops from the endothelium covering the delicate connective tissue trabeculae of the membranes, or it may arise from the perithelium of the cortical blood-vessels.

Where the histogenesis can be traced to the endothelium, as it usually can in the brain, there should be no doubt as to the nature of the growth. Von Jannsen's* case is a typical example of endothelioma traceable to the cerebral membranes, while Carter's† cylindroma may be referred to the blood-vessel sheaths. Where the histogenesis can not be traced to the endothelium the morphology is more or less conclusive, especially in those cases where the type of blood-vessel or lymph vessel with its corpuscular elements is retained. The difficulty still remains where the endothelioma resembles carcinoma, adenoma, simple sarcoma, or, indeed, a combination of the three. The alveoli in such cases may be lined with flat, cuboidal, or cylindrical epithelial-like cells, and may present a variety of degenerations of stroma, of cells, or of both.

Von Volkmann's definition has the advantage of establishing a nomenclature based upon histogenesis alone; and this histogenesis, as clearly indicated, is directly from endothelial cells. It would thus remove from the literature the more or less ambiguous terms which refer to structural peculiarities, and which include both epithelial and endothelial tumors among the present group.‡ Such ambiguous terms are those proposed by Bizzozero, Orth, Klebs, Hansemann, Lubarsch, and others, and include the names angiosarcoma, perithelioma, haemangiosarcoma, lymphangiosarcoma, angiosarcoma endothelioides, cylindroma, endothelioblastoma, and endothelial carcinoma.

For the practical separation of endothelioma and carcinoma von Volkmann's definition is not sufficient, in that endothelium is often not to be distinguished morphologically from epithelium; and the actual origin of the tumor may often be determined only by exclusion. Indeed, Ribbert has shown that the histogenesis of a tumor, even in its peripheral parts, is often not to be recognized with certainty, since endothelioma and epithelioma may give rise to similar microscopic pictures. And what von Volkmann interprets as the transition from the endothelioma cell to the normal flat endothelium of the lymph spaces, Ribbert equally regards as carcinoma penetrating the neighboring tissues in the form of thin, flat epithelial cells.

It is scarcely possible to find sharp differential lines between these two forms of tumor. But Lubarsch§ believes that more may be gained from a careful study of the finer histological structure of the cells than from the histogenesis. Such structural differences he finds

* Hansemann. *Op. cit.*

† Ribbert. Ueber das Endothel in der pathologischen Histologie. *Vierteiljahrsschrift der Naturf. Gesellsch. in Zurich*, Jahrg. 41.

‡ Von Volkmann. Ueber endotheliale Geschwulste, etc. *Deutsche Zeitschrift für Chirurgie*, xli.

§ Lubarsch. Hyperplasie und Geschwulste. *Beigabe zur allg. Path.*, li, 1895, 366, and Endotheliom. *Beigabe zur allg. Path. und path. Anatomie*, Wiesbaden, 1897.

|| Ziegler. *Allg. path. Anat.*, 9. Aufl., 1898, 110.

* Von Jannsen. Ein Sarcom der Pia mater. *Archiv für Kinderheilkunde*, cxxvii, 1895, 215.

† Carter. A Case of Cylindroma of the Brain. *Journal of Pathology and Bacteriology*, vi, 1897, p. 84.

‡ Such cases have been known to arise, by Aschmann and Koster, the former of whom shows either perithelium or endothelium as the origin for endothelioma while the latter can only explain an origin from endothelium or epithelium for epithelial tumors.

§ Lubarsch. *Op. cit.*

in the coarser granulation of the protoplasm in the cells of epithelial tumors, in their irregular mitoses (Hansmann), in the occasional demonstration of prickles, and in the formation of keratohyalin—features absent from cells of endothelial origin.

What Lubarsch has said of endothelial tumors may be said of tumors in general: "It is wrong to apply only one criterion or but one method of examination in determining the nature of the growth. The more exact the histological examination and the more careful the study of the morphological relations and of the gross anatomical structure, the smaller will be the number of doubtful cases. But even then there must always remain a number of cases as to the nature of which the first authorities can not agree."

(To be continued.)

PUERTO PRINCIPE, CUBA; ITS SANITARY CONDITIONS AND VITAL STATISTICS.

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THE city of Santa Maria de Puerto Principe is situated in 21° 20' north latitude, and almost 78° west of the meridian of Greenwich, in the central portion of the province of Puerto Principe, which is in the eastern part of the island of Cuba. Originally the city was located on the north coast, near the place where Columbus landed in 1492; but, in consequence of the depredations of the buccaneers and pirates who made the Gulf of Mexico their cruising ground, it was found necessary to remove the port from the coast to a site some forty-five miles inland, where there was an Indian village, Camaguey, the residence of the cacique. This town was on an undulating prairie that had a dry siliceous soil, and was near the junction of two small streams, the Hatibonico River on the east and south and the Tinima River on the west and south. During the centuries that elapsed since its settlement the town gradually developed into a city that covered some seven hundred and fifty acres; and the population increased from twenty in 1534 to more than sixty-two thousand in 1862. Since the latter date, however, there has been a decrease, and it is believed that there are not more than twenty-five thousand inhabitants at the present time.

While the four hundred years of Spanish occupation have witnessed the constant growth of the place, and are contemporary with the general advance in municipal improvement throughout the civilized world, nevertheless this city has but little to evidence any improvement in the manner of living that is superior to that in vogue in the sixteenth century. The streets are narrow and irregular in their course, and have been laid out without reference to any plan. Some of the principal streets have fair cobble-stone pavements for a part of their course; but many of the streets are unpaved

and the exposed rock or sandy soil constitutes the road-bed. To an extent the streets are the dumping ground for refuse, though this evil does not exist to the extent that prevails elsewhere in Cuba. They are, however, the only channels by which the surface water is disposed of, and it is the rule for house drains to empty into the street. There are no gutters, except such as the heavy rains have worn in the roadbeds, and there is not a sewer in the city.

There is no system of public water supply; while the greater portion of the people use water from wells or cisterns, these sources of supply are sometimes exhausted in the dry season and water is taken from the small stream of the Hatibonico or the Tinima River, which are both likely to be polluted in the vicinity of the city.

The houses are commonly constructed of brick, and as a rule they are but one story in height. Detached residences, that are so familiar in our Southern cities, are unknown. The floor of the house is laid on the ground without any underlying cellar or intervening air space; and there is no ventilation of the space beneath the floor, and no subsoil drainage. It is not surprising, therefore, that the rooms are damp and that diseases prevail that are the usual concomitants of such methods of construction. In the better class of houses these floors are constructed of brick, as wood decays too quickly.

Those rooms of the house that face the street are provided with large unglazed shutters, and similar shutters or doors furnish the light and ventilation for the apartments that open on the interior courtyard that is an indispensable feature of a Cuban house. The rooms are usually spacious, and the high walls and exposed roofs afford a generous cubic capacity. Frequently the rooms communicate by an uninclosed archway, which would make the disinfection of an apartment practically impossible by fumigation.

In the interior courtyard is the cistern or well that supplies the water for the inmates; the cistern is cemented, but the integrity of the materials that form its walls is an uncertain matter. The wells are sometimes cemented for a distance of twelve feet from the surface of the ground; but as a rule they are excavated in the rock, and none of them is above suspicion of seepage.

In some rear room, often adjacent to the open kitchen, is the privy; it is a pit excavated in the rock, and was once cemented, but it is not possible to learn of any one who has ever had such a latrine repaired after its use has once commenced. Sometimes there is a pipe or flue that passes from the pit to the roof so as to afford a means for the escape of the odors and gases. When the odor becomes intolerable, or the pit is filled to overflowing, the contents are removed by manual labor. It is said, on reliable authority, that during the rainy season the saturation of the ground is so great that it is not unusual for these pits to be filled to the brim;

if such is the case, it is apparent that during the dry season there will be an opportunity for the seepage of the liquid contents into the adjacent well or cistern. There were more than five thousand houses in the city in 1879, and, while that number has been reduced in all probability to four thousand buildings at the present time, each of these has its privy, and the filth saturation of the soil that has gone on for years may be appreciated.

There has been in existence a very judiciously arranged code of sanitary laws for the cities of this island, but there is every evidence that they were more honored in the breach than in the observance.

Each householder has been his own scavenger—that is to say, he has had the habit of allowing all refuse, including manure from animals that are kept in a stall in the back part of the house, to accumulate until there is such a mass that it is no longer tolerable, when he has it removed. Fortunately, the limited space in the courts of most of the buildings will not permit a very large accumulation. There has been no system of street cleaning and garbage removal such as would be likely to exist in a properly regulated city in the United States.

The regulation that provided for the registration of deaths seems to have been properly regarded; so these records have been collated for the past five years. These records show that the total annual mortality has increased since 1894, and it is believed that this has been due to the fact that the outbreak of the Cuban revolution resulted in the assignment of a large military force in the city and province, as well as to the policy of depopulation of the rural districts and the segregation of the so-called reconcentrados in the cities, where they could not obtain work or proper food. Such factors would inevitably result in an augmented mortality rate. The deaths recorded were 721 in 1894, 1,699 in 1895, 1,328 in 1896, 1,316 in 1897, and 1,356 in 1898. This increase in the number of deaths, which amounts to more than ninety per cent. more than the total before the revolution commenced, is very significant.

In the department of Puerto Principe there are more than thirty-five hundred United States soldiers stationed, almost half of the command within a short distance of the city. The importance of an investigation of the mortality records is that they serve by their evidence of what have been the principal causes of death to inform us in regard to the diseases that prevail in this locality, and enable those in authority to recommend measures that may serve to diminish the prevalence of such diseases.

One of the questions of paramount interest here, as elsewhere in Cuba, is the prevalence of yellow fever. The local physician assumes that the disease is endemic, and in support of that position is the fact that, except in a few instances, the recorded deaths from that fever, even when it was evidently epidemic, were in persons of Spanish birth. In 1894 there were only twenty-six

deaths from this disease; but consequent upon the advent of troops, many of whom came here direct from Spain, there were six hundred and ninety-six deaths from this fever in 1895. It is estimated that there were seven thousand Spanish soldiers in the city at that time, so the death-rate was about seventy to the thousand of those exposed. It is futile to speculate upon the prevalence of the fever, because there is no record upon which any estimate may be based. But from all available information it is learned that the men were crowded into improvised or other barracks; that they lived in an atmosphere of their own excrement and drank water that was polluted thereby; that their food and clothing was poor, so that they were debilitated and became easy victims to disease; and, when the fever appeared, there was no effort to remove the men to some other place and to disinfect the barracks or its environments. In consequence of the exhaustion of most of the susceptible material, there were but fifty-nine deaths from yellow fever in 1896, and most of these were during the first half of the year. In 1897 there were but three, and in 1898 but two deaths due to this fever. There has been no epidemic of fever since 1895, the number of cases that appeared in 1897 and 1898 are relatively insignificant, and the experience in Santiago, a city that was subject to severe epidemics of this fever, when sanitary principles were applied by General Wood, suggests that attention to what are fundamental principles for the maintenance of health will do much to prevent an epidemic.

The mortality caused by other fevers presents a marked increase in comparison with the year antecedent to the war:

	1894.	1895.	1896.	1897.	1898.
Typhoid fever.....	11	26	15	36	39
Malarial fever.....	1	6	1	1	24
Benign fever.....	19	42	34	50	115
Miscellaneous fevers.....	8	23	21	28	8

The number of deaths due to typhoid fever is not as great as might be expected under the circumstances. Many of those who die of malarial fever acquire the disease on the plantations.

The greatest mortality from any one disease is that caused by tuberculosis. This might be expected in a population that lives in houses built without regard to subsoil drainage or ventilation; where there is no effort to isolate those affected with the disease, or to disinfect apartments or sputa. Tuberculosis caused 141 deaths in 1894, 142 in 1895, 160 in 1896, 188 in 1897, and 181 in 1898. Probably cases of tuberculosis from prison are included in the death-report, but the prison commitments.

Diseases of the intestinal tract caused a large number of deaths annually: 68 in 1894, 188 in 1895, 269 in 1896, 339 in 1897, and 296 in 1898. The insufficiency and poor quality of food, as well as the contami-

nated water supply, are responsible for part of this prevalence.

The infectious principles of tetanus and of glanders seem to be endemic, as there are deaths from these diseases each year.

The accompanying figures give the totals of several classes of disease during the quinquennium 1894 to 1898:

	1894.	1895.	1896.	1897.	1898.
Communicable diseases.....	386	1,263	715	685	759
Diseases of nutrition.....	19	51	113	124	217
" " " the nervous system.....	83	98	128	121	95
" " " circulatory system.....	58	103	157	142	105
" " " respiratory.....	46	49	48	32	31
" " " digestive.....	44	33	41	61	52
" " " genito-urinary.....	19	28	28	19	11
Miscellaneous, etc., diseases.....	66	74	98	131	86
Total.....	721	1,699	1,328	1,315	1,356

During the five years that were included in the investigation, the total mortality in each month showed but slight deviation from the average for the sixty months. If the yellow-fever deaths, which occurred principally during the summer months of 1895, should be excluded because they occurred in soldiers who had just arrived and who did not constitute a part of the native population, then the greater mortality was during the months from December to June.

As elsewhere, the deaths under five years of age exceeded in number the mortality during any other quinquennial age epoch, except during the yellow-fever epidemic of 1895, when the heaviest mortality was during the quinquennium of twenty to twenty-five years.

The commanding general, L. H. Carpenter, who is the military governor of the province, has, since his arrival, done all that he could to better the condition of affairs. But such work has been a matter of difficulty because there has been no money in the provincial treasury, and the only source of revenue is the customs receipts at the port of Nuevitas. A small allotment of funds has been made by the war department for sanitary purposes, and the dirtier streets, the slaughterhouse, and some similar places are undergoing cleansing. As it is believed that the condition of the privies has much to do with the prevalence of disease, and the poverty of the municipality and of its inhabitants precludes the possibility of the construction of sewers, the immediate needs of this sanitation will be met by means of the pneumatic odorless excavating apparatus.

That a public water supply is essential is also recognized, but there are no funds available for the construction of an aqueduct from the nearest source for an ample supply; so an effort will be made to remedy this want by boring artesian wells.

When there is betterment in the two important factors of municipal hygiene, a plentiful supply of water and the removal instead of the storage of excrement, much will have been accomplished; but it will be a

matter of difficulty to instill in the inhabitants those principles of cleanliness and of sanitation that will be necessary to make the beautiful province of Camaguey one of the garden spots of the earth. It is intended to make a house-to-house inspection, employing Cuban physicians who will make reports in regard to the sanitary needs of the domicile; and if the owner is financially able to undertake the improvements required, he will have to make them; but if he is unable, then the municipality must do what is necessary.

It is to be hoped that, if nothing else accrues from the occupation of Cuba by the United States, at least there will be the accomplishment of those sanitary reforms that will terminate the conditions which have made the island a constant menace to us during this century. The military authorities, and particularly the surgeon-general, are duly appreciative of the great responsibility, and through the medical corps are undertaking such sanitary reforms as are likely to further the health of the native population, and thus lessen the exposure of troops that must be stationed here.

THE POST-PARTUM MANAGEMENT OF UTERINE DISPLACEMENTS.*

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GENTLEMEN OF THE SLOANE MATERNITY ALUMNI SOCIETY: Your president has asked me to stimulate a discussion by stating my convictions upon this subject.

I have earnest convictions upon it. Most of them have already been published and discussed by the profession. For the purpose of stirring debate, therefore, I shall cite them as published, fully recognizing the lack of modesty which permits an author to quote from himself. These convictions are about as follows:

First. All post-partum displacements are of the same general nature.

Second. The question of their prevention is one of the gravest importance, having a bearing upon longevity itself.

Third. In some few cases, "no matter what you do," the womb will obstinately remain displaced.

Fourth. Trusting any post-partum case to Nature is the wrong thing to do.

Fifth. Doing the right thing will obviate most of the displacements and rob those that persist of their danger.

Sixth. There is a right thing to do.

Post-partum displacements may be to the sides or to the rear and downward. I do not believe a forward post-partum displacement is pathological. But the downward, lateral, and retrodisplacements are all from

* Read before the Sloane Maternity Alumni Society, January 27 1899.

the same cause—namely, enfeebled muscular power—measures for the improvement of which must be applied in early pregnancy, or before conception. Even subinvolution, the most prolific cause of displacement, does not occur where there are no retained secundines and the muscular vitality of the patient is good; so that we must look behind the subinvolution to the muscular debility. It likewise goes without saying that a laceration permitting a prolapse does so because the muscles are impaired and enfeebled. Overstretching the perineal muscles by prolonging the second stage of labor to avoid laceration is another cause of enfeebled muscular power. Frequently, to make good records, we allow this overstretching, and, though our statistics may not suffer, the woman does. Her perineal muscles thenceforward are really dilated muscles, no more capable of fulfilling function properly than the dilated heart.

Therefore, with laceration there is muscular enfeeblement, and without laceration there may be muscular enfeeblement. For this reason I have maintained, in the face of some obstetrical derision, that a frank laceration—assuming careful, successful suturing—is better than a functionless muscle which is often left untoned. For the same reason I insist upon a stitch for the smallest perineal laceration. And I think we have here a most important factor in preventing post-partum displacements.

Regarding the importance of treating and preventing post-partum displacements, I have written (see *New York Medical Journal*, December 25, 1897):

"This malady (of uterine displacement) is the most prevalent ill among women; it contains a sure future menace; all measures for its relief, operative or otherwise, are unsatisfactory; and, most important of all, it can be largely prevented when both laity and profession appreciate its frequency, its gravity, our limitations in coping with it, and the ease with which it can be prevented in most cases.

"The trouble in getting rid of the malady hardly compares with the danger of neglecting it. I shall not speak of the immediate harrowing symptoms; they are blessed if they force a woman to a cure. I pass, too, the aggravation of the pelvic trouble by neglect, and speak of the insidious robbery of the last decades of life that results.

"I have been strongly impressed with the frequency of renal insufficiency and lithæmia in pelvic diseases of women, especially our subject malady, and I am glad that men like Mann, of Buffalo, and Etheridge, of Chicago, are calling attention to it. These patients, because of the predominant uterine symptoms, are seen only by the gynecologist during the period when the insidious vital changes can be checked.

"My argument is that muscular and vital debility brings about this malady; conversely, that this malady brings about muscular and vital debility; and that this reciprocal relation—this malady of passive congestion and engorged venous system—leads to cardiac, renal, and arterial changes that materially shorten life."

As obstetricians we know that there is a mysterious connection between the pelvic congestion of pregnancy

and the dreaded eclampsia; we have theories but no positive knowledge why pregnancy should throw out into menacing prominence renal trouble never before suspected.

My third conviction is that the womb will remain displaced in some cases in spite of all that can be done. I have been severely criticised for pointing out to a scientific body, practically in executive session, the feebleness of our resources in regard to uterine displacement. I still question the expediency—to say nothing of the honesty—of claiming infallibility in medicine. I still think it aids progress to study the disadvantages of our favorite device. I therefore freely confess that some of my most important maternity cases, in spite of all that could be done, have ended with displacements. I have seen displacements follow the work of some of the best men in the city. Moreover, I have seen, and others have told me of, cases of displacements moored to the abdominal wall by the best men in the country, in which the womb had far better have been adrift in the pelvis. Although it was anchored up, or forward, in ideal theoretical position, the symptoms—in these few exceptional cases—have proclaimed that the womb was still displaced from its position of ease, whatever may have been its anatomical relation.

I am convinced that we can no more prevent some displacements than we can prevent lacerations of the neck of the womb. If we dislike to admit this as a professional limitation we can charge it to Nature, who certainly seems to have erred in these two regards.

And this leads naturally to my fourth conviction, which is an intense one. Trusting post-partum cases to Nature is the wrong thing to do. And, moreover, "meddlesome midwifery"—so called—is the only midwifery a scientific man should deign to practise. This ignorant horror of "interfering with Nature" is on a par with spitting on the garment hem to exorcise evil spirits from the newborn, which I have seen practised by the reverential of certain calibre. In the *North American Review* of February, 1897, I wrote upon this subject:

"Considering Nature's marvelous care of her children, the popular reverence for her is not strange. Yet, contrast the bitterness of the wild fruit with the sweetness of the cultivated; the hedge corner wild rose with the American Beauty; the knotty prairie horse with the lithe-limbed thoroughbred. Contrast the adult mouth in which dentistry has not 'interfered with Nature'—the mouth full of tooth cavities, snags, and abscesses—with that full of sound, white teeth saved from decay. If it were as patent that blood vessels rotted and I here add post-partum engorgement and displacements as is inevitable as tooth decay, and as lost as remediable when taken in time—who among the medical would not avoid it?"

Let us as medical men follow this contrast further. Consider the coarse, thick, fat of the country fowl, his clumsy muscles and cloddy flesh, his clubbed nails, his

lengthened intestines—for the intestines of the herbivorous Russian peasant are some feet longer than the intestines of those who live on better prepared and more concentrated food. Put such a sluggard by the side of the trained athlete, whose finely wrought muscles answer to his will as quickly as the violinist's fingers run the scale. Then, see what happens when man, with scientific precision, "interferes with Nature"—which is just the work modern civilization is doing.

If, therefore, a certain sort of food modifies the length of the intestines by several feet, we can easily deduce what modification the ligaments which support the womb undergo when forced to carry the post-partum organ twice or thrice its normal size. We know, however, without deduction that the ligaments do stretch greatly.

Now, the womb rarely returns to normal size before the sixth or eighth week. Note definition of the puerperium in *Gould's Medical Dictionary*: "The period from birth to the time when the uterus has regained its normal size." I have watched this very carefully in a number of women, and have seen in the perfectly clean womb of a non-nursing mother involution delayed as late as the third month. When the puerperium ends is a question of fact and not of dates. Therefore, when a woman walks around with a subinvolved womb, the heavy organ will undoubtedly stretch its supporters—sometimes temporarily, but often permanently—and then a displacement of one kind or another results.

The sogginess of the subinvolved womb leads to another menace, that of sepsis, closely related to our subject. I quote from my paper, *The Feminine Element* (see *New York Medical Record*, March 19, 1898):

"The classic time for making the last visit (in cases of childbirth) is the tenth day. The woman, as a rule, is left to Nature from this time on. Considering the post-*puerperal* engorgement of the womb and the fact that involution is rarely complete before the sixth week, and reflecting upon the gravity of subinvolution in the light of the resident germ, the writer requests the judgment of the profession upon the advisability of establishing a routine of observation of these patients from the classic tenth day to the time of complete involution."

My next conviction is that post-partum care will prevent many displacements, will correct more, and will relieve the symptoms from those that persist. But in order to be allowed to bestow post-partum care we must enlighten the laity. They now fully understand the importance of preventing the spread of contagious diseases. And, to reiterate the dental analogy, they likewise anticipate tooth decay, because they know it is inevitable. As a consequence, alveolar abscesses and rotten teeth are rare with Americans, but very frequent in France, for example, where dentistry is still an American specialty, and the populace "do not interfere with Nature." I believe we can teach patients to criticize the doctor who dismisses them on the tenth day of the puerperium to

the irresponsible care of Nature. I quote again from my paper on Retrodeviations of the Uterus:

"If patients will let us keep them well rather than patch them ineffectually when sick, we can take them to maternity in good vitality. The appearance of the veins in the hands, neck, temples, legs, will tell us what is happening to the veins in the broad ligament. We can relieve abdominal pressure from gas and ptosis by bandages and internal antiseptics; we can stir up the sluggish circulation; we can prevent constipation.

"In childbed we can keep them out of an exclusively dorsal position; we can even turn them face downward occasionally, and teach them that they are ready to get up only when the womb has involuted regardless of tradition. We can curette promptly when necessary, and insist upon the immediate repair of damaged tissue. And, finally, as routine, we can begin tamponing under the heavy uterus from the tenth day, giving ergot, iron, or digitalis when necessary."

The tampon, carrying its medication, reduces the engorgement, supports the heavy organ, and stimulates involution. It is strongly urged in every case where the patient will permit it. Once begun, the patient is the best witness to its efficacy.

Lacerations at the neck of the womb delay involution, and thus aid post-partum displacements. My convictions on this subject are found in my paper on *The Temptation of Skill*, recently read before the Obstetrical Section of the New York Academy of Medicine, viz.:

"Lacerations at the neck of the womb have occasioned much hard feeling in the profession, and have given rise to many misunderstandings among patients.

"The profession would do well to enlighten women about lacerations at the neck of the womb. We should explain why it is beyond our power to prevent them, and why there is even no practical device known to the profession for so doing. We should teach that many will heal spontaneously if attention is paid to them during the months following confinement; that it is by no means settled as wisdom to sew them at the time of confinement; that the doctor who tells a patient with such trouble that she was 'neglected in confinement' is either dishonest or means that the patient neglected herself after she dismissed her obstetrician by failing to have local attention.

"If women were so enlightened it would be less easy for a contemptible medical thief to poison the mind of a patient against the man who carried her conscientiously through a wearisome confinement. Nor would it be deemed a confession of bungling to tell of a laceration needing attention. Then all might receive attention; fewer would require operation; none need be passed silently to avoid criticism.

"Such lacerations may bring catarrh, metritis, sterility, nervous troubles, tubal involvement, uterine displacement, and pelvic congestion. *And how often is this condition, which is a progressive development made possible by the patient's neglect of herself, charged years afterward to the carelessness of the obstetrician!*

"A soggy, subinvolved womb will swell at times as much out of shape as a dropsical leg or abdomen; and a nick that would otherwise heal and leave no more trace than a shaving wound of the face is thereby exaggerated, rendered indolent, and made to granulate into

a scar. Lack of attention to the womb during the three months following confinement is where the neglect occurs. This point can not be accented too strongly. When women know it, and act on the knowledge, trachelorrhaphy will be practically banished from gynaecology, and operations for retrodeviation rare events."

These convictions, expressed in the past, have been made stronger by increasing experience, and I can only reiterate them.

Professor Paul F. Mundé, in discussing my paper on Uterine Displacements, stated that he "had for many years advised the introduction of a pessary as a cure for an old retrodisplacement of the uterus before a parturient woman, so afflicted, was allowed to leave her bed, at the time when all her pelvic organs were undergoing involution."

The writer would tampon in these cases, even with the pessary in position, and add the iron, ergot, digitalis, or massage, when indicated.

In closing, this society is urged to aid in the attempt to destroy absolutely the reliance heretofore placed in post-partum cases upon that discredited old individual, Dame Nature.

66 WEST FIFTIETH STREET.

Therapeutical Notes.

Vaginal Suppositories of Quinine in the Treatment of Leucorrhœa.—Hardwicke (*Lancet*, January 7th) reports good results from the insertion once a day of a suppository containing three grains of quinine hydrobromide.

Suppositories for Cystitis.—The *Gazzetta degli ospedali e delle cliniche* for January 31st attributes the following suppository to subdue the pain of cystitis to Guyon:

B Extract of belladonna, $\frac{1}{2}$ of each..	15 grains;
Extract of opium,	15 "
Iodoform	3 grain;
Virgin wax	15 grains;
Cocoa butter	45 "

M.

To make one suppository.

Urtica Dioica as a Hæmostatic.—Both (*Archiv der Pharmacie*, xliii; *Journal de médecine de Paris*, January 29th) recommends a tincture of the stems, leaves, and flowers of the stinging nettle (*Urtica dioica*), gathered in the spring, as an application to hæmorrhagic surfaces in cases in which there is no lesion of a large blood-vessel.

Iodine in the Treatment of Chronic Eczema of the Hands.—The *Revista de Medicina y Cirugía Practica* for January 15th, quoting the *Therapeutische Monatshefte*, attributes the following formula to Edlén:

B Iodine	13 grain;
Potassium iodide	4 grains;
Glycerin	180 "

M. To be applied every night, and the hands covered with compresses.

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SUTURE OF THE HEART FOR PENETRATING WOUNDS.

IN the *Giornale internazionale delle scienze mediche* for January 15th there is published a communication that was presented before the Royal Medico-chirurgical Academy of Naples on August 14, 1898, by Professor Giovanni Ninni, who, combining the statistics of Jamin, Latelenet, and Fischer, finds that in only nineteen per cent. of the cases of penetrating wound of the heart does immediate death take place, so that in the great majority of instances surgical intervention may be resorted to in the well-grounded hope of saving life, provided no time is lost. He mentions eight cases treated by means of suture, and gives the details concerning one of them, which occurred in his own practice.

In Farina's case the wound, which was at the apex and edge of the right ventricle, was seven millimetres (about a quarter of an inch) long. It was sutured immediately. The patient died on the sixth day, probably of pneumonia. In Rehn's case the wound, which was fifteen millimetres (about half an inch) long, was in the same situation. It was not until twenty-four hours had elapsed, and the patient appeared moribund, that suture was performed, with partial suture of the pericardium, and drainage of the pericardium and pleura established. The patient recovered. In Cappelen's case the wound was at the apex and edge of the left ventricle, and was two centimetres (about three quarters of an inch) long. The left coronary artery was wounded. Intervention was resorted to within a few hours. Primary union took place, but the patient died of pericarditis on the second day. In Parozzani's first case the wound was of the same size and situation as in Cappelen's. Suture was resorted to at the end of twelve hours. Primary union occurred, and the patient recovered. In Parozzani's second case the wound was the same in situation, but only fifteen millimetres (about half an inch) long. The operation was performed within a few hours. There was primary union, but the patient died in collapse on the second day. In the author's own case the wound, which was twenty-five millimetres (about an inch) long, involved the anterior wall of the left ventricle a little beneath the transverse sulcus and a little to the outer side of the longi-

tudinal sulcus, and ran parallel with the long axis of the heart. Surgical intervention was almost immediate, but the patient died before the flap of the thoracic wall had been entirely sutured. In Giordano's case the wound was of the edge of the left ventricle and was two centimetres (about three quarters of an inch) long. After two hours the heart and pericardium were sutured, and drainage of the pleura was established. Death took place on the twentieth day, from septic pleurisy of the left side with multiple pulmonary abscesses on the right side. In Parlavocchio's case the wound was V-shaped. The two arms of the V measured together about three centimetres and a half (approximately, an inch and a quarter). After eight hours it was sutured, primary union took place, and the patient recovered. Concerning Rudis-Jicinsky's case (*New York Medical Journal*, April 23, 1898), Ninni does not consider it certain that the wound was penetrating. Dr. Rudis-Jicinsky did not state that it was.

The author mentions these cases in the order of their occurrence. The first one, Farina's, occurred in June, 1896. The results, three recoveries in eight cases, may, we think, be held not only as warranting surgical intervention, but as rendering it imperative under ordinary circumstances; as the author himself puts it, "Systematic abstention has no *raison d'être* in penetrating wounds of the heart."

PROFESSOR VIRCHOW ON INNOVATIONS IN ORTHOGRAPHY, ETC.

IN the first number of volume cly of the *Archiv für pathologische Anatomie und Physiologie und für klinische Medizin* the venerable editor of that great journal gives the reasons why in its pages he has not fallen in with the new-fangled notions of the pedagogues (*Schulmonarchen*) as to the spelling of certain classes of German words, and intimates that he is not likely to adopt their innovations. He deals with the virtual suppression of the letter *c*, save in certain proper names or when followed by *h*, and its supersession by *k* and *z*; with the substitution of *t* for *th* and the dropping of the terminal *h* in some words such as *roh* (humorously declaring it a *Roh-heit* to write "*Rohheit*"); and with the replacement of the infinitive termination *-iren* by *-ieren*. He does not deal with the change of the terminal *-ss* to *-s*, but the words *Bedürfniss* and *Verständniss* occur several times in his article, and in only one instance, presumably by a typographical error, is the final *s* omitted. We notice, too, that the *Archiv* still employs *Ac*, *Oe*, and *Ue* instead of *Ä*, *Ö*, and *Ü*.

We are glad to see that Professor Virchow takes this stand, because his doing so can hardly fail to prove a powerful aid to the reaction that has already set in in Germany against the mandates of the "*Schulmonarchen*." We have not space to give the arguments that he employs, but we can assure our readers that they are full of his customary cogency. The German language is not the only one that is suffering at the hands of the professed *Weltbesserer*, and whenever a man of Virchow's power lifts a hand in rescue of its purity the task of opposing the poacher in the field of English is lightened.

Incidentally, Professor Virchow remarks upon some technical terms in use in medical writings—for example, the application of the term *sterno-cleido-mastoid* to a muscle which of course is not nipple-shaped; that of *arachnoid* to blood-vessels that are in no wise suggestive of a spider's web; and the substitution of *deltoideus* for *deltoides* as a name for the deltoid muscle. We fancy we detect a shade of deserved derision in his remark on the common use of *ary-* for *arytano-*, and his humor is unrepressed when he comes to speak of the interminable words coined by the chemists—"Tape-worm words" (*Bandwürmer von Worten*), as he calls them. He still thinks it best to assist the reader's understanding by breaking these words with an occasional mile-post in the shape of a hyphen.

MINOR PARAGRAPHS.

THE ARCHIVES OF NEUROLOGY AND PSYCHOPATHOLOGY.

WE can not refrain from calling attention to the exquisite appearance of this new publication. The third number of the first volume, issued from the State Hospitals Press, in Utica, in February, has, we believe, never been excelled, the world over, by any medical periodical, as regards typography and press work. And the material presented, consisting of two hundred pages of reading matter, is worthy of its sumptuous dress. It embraces an article entitled *Studies on Ganglion Cells*, by Dr. James Ewing, and one entitled *Bibliographical Contribution to the Cytology of the Nerve Cell*, by Dr. Smith Ely Jelliffe. Dr. Ewing's article is illustrated by means of six beautifully executed plates, by the Helio-type Printing Company, of Boston, which are reproductions of the author's own drawings, many of them in colors. The number is worthy of being bound by itself as a monograph.

THE ANOMALIES OF ENGLISH MEDICAL DEGREES.

THE *Journal of the American Medical Association* for March 4th, in an editorial on this subject, falls into a few errors of fact, which is not at all surprising. They do not, however, invalidate in any way the purport of the journal's argument. The first error is the statement that the three colleges of surgeons of England, Scot-

land, and Ireland respectively grant only the two diplomas of membership and fellowship. Now, as a matter of fact the College of Surgeons of England has no licentiates, but only members and fellows; while those of Scotland and Ireland have no members, but only licentiates and fellows. It is hardly correct to say that "there is no surgical equivalent for the awful dignity of an F. R. C. P." The highest grade, viz., F. R. C. S., of the various colleges of surgeons does correspond to the grade of F. R. C. P., but the English College of Surgeons has no equivalent for the lowest grade of L. R. C. P., while the Scotch and Irish colleges have no equivalent for the intermediate grade of M. R. C. P. It is true that the English M. R. C. S. has no voice in the government of his college, and that practically his qualification is only a license. Again, there are many universities besides Oxford, Cambridge, London, Durham, Edinburgh, and Dublin which are authorized to grant the various medical degrees, viz., Aberdeen, St. Andrew's, and Glasgow—all ancient and historical universities in Scotland—and two recent ones, the Royal University in Ireland, and the Victoria University, Manchester, in England. To these we believe the University of Birmingham has been recently added. There is no doubt, however, that the increasing dissatisfaction with the cumbersome system of medical graduation in England will eventuate before long in some very radical changes. The essential distinction between the M. D. and the various qualifications lies in the fact that from an academic or university point of view a doctorate, whether in medicine, law, theology, or what not, is regarded as a purely scholastic distinction, and only incidentally and in later times connected with the pursuit of any professional vocation. But, as a matter of fact, current practice has departed for so long from the academic standpoint that sooner or later the latter must accommodate itself to the former. We may, perhaps, be permitted to say that in our opinion the decadence of pure scholasticism is a misfortune; at the same time we can not shut our eyes to it as a fact.

A CASE OF CURE OF PROGRESSIVE MUSCULAR ATROPHY.

AN interesting case is recorded by Dr. A. H. P. Leuf, of Philadelphia, in the *Pennsylvania Medical Journal* for February. It is that of a typesetter, twenty-four years of age, who was first seen on July 12, 1895, and found to be suffering from the symptoms of progressive muscular atrophy. The case was also diagnosed as one of progressive muscular atrophy at the department of nervous diseases of Jefferson Medical College. The chief value of the report is the careful record of the electrical reactions tending to place the accuracy of the diagnosis beyond doubt—a matter of great importance—since the patient was on February 6, 1899, nearly six years later, apparently completely cured. The author says that the patient's symptoms in no way indicated the diseases with which progressive muscular atrophy might be confounded—namely, chronic myelitis of the anterior horns, peripheral neuritis, syringomyelitis, atrophic joint affections, amyotrophic lateral sclerosis, and muscular pseudo-hypertrophy. The treatment consisted of the constant current administered three times weekly for five minutes to each hand—the strength, in the absence of a milliampèrèmeter, being stated as twenty cells of a liquid chloride-of-silver battery. At first strychnine sulphate, one thirtieth of a grain, with ar-

senic, one one-hundred-and-twentieth of a grain, and gentian, was administered three times daily. This was discontinued on August 27th, and reliance placed solely on galvanism, reduced to fifteen cells, and massage—continued up to November, 1894. Cures in this disease are so rare as to be well deserving of special record.

CAMPHOR AS AN ANTIDOTE TO CARBOLIC ACID.

ALTAREZ (*Revue de thérapeutique*, January; *Giornale internazionale delle scienze mediche*, January 31st) relates a case of carbolic-acid poisoning to which he was called in consultation. He thought that the poison had all been absorbed, and so he did not try to provoke vomiting, but advised camphorated oil to the amount of about three ounces, simply for the sake of its soothing action on the gastric and œsophageal lesions probably caused by the acid. But it seems to have accomplished more than this, for the patient recovered.

MEDICAL MEN AND THE LAY PRESS.

THE increasing frequency of reports of surgical operations, etc., in the lay press is a source of considerable disquietude to the more honorably minded members of the medical profession. As a rule, however, such reports are made ostensibly by a lay reporter; and, while it is unlikely in most instances that he obtained his information without the connivance of those concerned, we are always anxious to give the benefit of the doubt as to any ulterior or unworthy motives being at work. When, however, as related in *The Progress of Medicine* for February 15th, a San Francisco physician, a teacher in a medical school, writes in the first person for the *San Francisco Examiner* for February 6th an article entitled *How I Removed Patrie's Stomach*, it sets us wondering how long any vestige of gentlemanly instinct will remain as a characteristic of the practitioners of the "learned" profession of medicine.

THE NORTH DAKOTA MARRIAGE BILL.

WE have already expressed our opinion upon undue restrictive legislation so strongly that it seems almost unnecessary to add anything more on this subject. The end sought to be attained, viz., the prevention of the perpetuation of unhealthy strains, whether physical or mental, is undoubtedly admirable, and has our entire sympathy. But we do not think that legislation which regards the love union of two people in the light merely of a stud-farm arrangement would be a proper way to effect that result, even if it were practicable. Moreover, we believe that since individual human sentiment always has been, is, and in our opinion will be stronger than any other consideration, we do not think that there is the remotest possibility of such legislation even aiding in the accomplishment of its purpose; while we are quite sure that it will be responsible for a great increase not only of "illicit" but also of promiscuous intercourse. In our judgment, the proper course is the education of public sentiment by the instruction of the youth of both sexes in the ethics of adolescence, and particularly in the relation of sexual matters to love.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

MR. TAYLOR's special articles on this subject, which have now been running in the *Journal* for a number of weeks, have elicited much commendation from our read-

ers. They treat of matters any one of which may at some moment become of great importance to the practitioner, and, yet, they are matters concerning which the profession has little if any systematized information. These articles will be continued until the whole subject has been covered.

MACHETE WOUNDS IN CUBA.

PEREZ (*Revista de medicina y cirugía prácticas*, Nos. 554 to 558; *Progrès médical*, January 28th) has analyzed fifty-nine cases of wounds with the machete. Only one was fatal, and death in that case was due to encephalic complications. Notwithstanding the frequency of tetanus in Cuba, in only one case of machete wound did that affection ensue, and in that instance it did not prove fatal.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending March 4, 1899:

DISEASES.	Week ending Feb. 25.		Week ending Mar. 4.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	18	7	14	3
Scarlet fever.....	170	18	181	13
Cerebro-spinal meningitis.....	0	9	0	9
Measles.....	217	3	...	...
Diphtheria.....	184	24	167	27
Croup.....	12	9	9	5
Tuberculosis.....	281	194	244	172
Small-pox.....	0	0	7	1
Chicken-pox.....	43	0	49	0

The New York State Medical Examination.—In the recent report of Dr. M. J. Lewi, secretary of the board of medical examiners representing the Medical Society of the State of New York, we find the following:

"Statistics from the advance sheets of Director Parsons's annual report show the marked superiority of the graduates of New York State medical schools in the licensing tests. From New York State graduates there was an average of one rejected answer paper to three candidates; from graduates of other schools in the United States, an average of one rejected answer paper to each candidate; and from graduates of foreign medical schools an average of two rejected answer papers to each candidate, due partly, perhaps, to ignorance of English. The conclusion is evident that New York State medical schools graduate men better fitted for the practice of medicine than the schools of other States.

"It is the purpose of the board to cooperate with all medical schools in an attempt to elevate the standard of medicine. With this object in view, suggestions and criticisms of our work are not only accepted but invited.

"The board again wishes to state clearly its position regarding exemption from examination in individual cases. When candidates that hold a registered literary degree graduate subsequently from accredited medical schools, and are then licensed by other State boards of medical examiners with standards equal to those required by the New York law, they should be permitted to practise medicine in New York State without the necessity of passing another licensing examina-

tion, provided the regents are satisfied that examination safeguards have been all sufficient.

"We wish to circulate widely the information that it is not our purpose to annoy or hamper competent or skillful practitioners of medicine from other States. The intent of the law is to keep out incompetent practitioners, not to make difficult the licensing of those who are qualified."

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, and cholera were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending March 4, 1899:

Small-pox—United States.

Antauga County, Ala.....	Feb. 24.....	Small-pox present.
Mobile, Ala.....	Feb. 24.....	4 cases.
Montgomery County, Ala.....	Feb. 24.....	Small-pox present.
Denver, Col.....	Feb. 4-11.....	2 cases, 1 death.
Washington, D. C.....	Feb. 23-28.....	11 "
Jacksonville, Fla.....	Feb. 11-18.....	1 case.
Key West, Fla.....	Feb. 25.....	3 cases.
Pensacola, Fla.....	Feb. 27.....	3 "
Savannah, Ga.....	Feb. 22.....	1 case,
		a soldier from Puerto Rico on Str. <i>Chester</i> .
Cairo, Ill.....	Feb. 23.....	9 cases.
Monmouth, Ill.....	Feb. 23.....	3 "
Evansville, Ind.....	Feb. 25.....	1 case.
Jackson City, Ind.....	Feb. 24.....	3 cases.
Peabody, Kan.....	Feb. 16.....	56 " 7 deaths.
Louisville, Ky.....	Feb. 16-23.....	29 "
Baltimore, Md.....	Feb. 8-27.....	2 "
Auburn, Me.....	Feb. 20.....	4 "
Lewiston, Me.....	Feb. 22.....	1 case.
Omaha, Neb.....	Feb. 4-11.....	1 "
Omaha, Neb.....	Feb. 11-18.....	1 "
Providence, R. I.....	Feb. 17-24.....	1 "
Jackson, Tenn.....	Feb. 11-18.....	9 cases.
Memphis, Tenn.....	Feb. 11-18.....	6 "
Alice, Texas, 40 miles west of Corpus Christi.....	Feb. 20.....	20 "
Alexandria, Va.....	Feb. 23-Mar. 2.....	20 " 1 death.
Norfolk, Va.....	Feb. 18-24.....	35 "
Portsmouth, Va.....	Feb. 18-25.....	36 "

Small-pox—Foreign.

Bahia, Brazil.....	Jan. 21-Feb. 4.....	12 cases.
Rio de Janeiro, Brazil.....	Jan. 6-13.....	18 " 7 deaths.
Hongkong, China.....	Jan. 15-21.....	1 case.
Cairo, Egypt.....	Jan. 22-28.....	2 "
Cairo, Egypt.....	Jan. 28-Feb. 4.....	1 death.
Gibraltar.....	Jan. 30-Feb. 5.....	1 "
Gibraltar.....	Feb. 5-12.....	1 "
Bombay, India.....	Jan. 24-31.....	3 deaths.
Ciudad Portillo Diaz, Mexico.....	Feb. 18-25.....	4 cases.
Mexico, Mexico.....	Feb. 10-17.....	10 " 2 "
Moscow, Russia.....	Jan. 28-Feb. 4.....	6 " 4 "
Odessa, Russia.....	Feb. 4-11.....	2 " 1 death.
St. Petersburg, Russia.....	Jan. 21-28.....	2 " 1 "
St. Petersburg, Russia.....	Jan. 28-Feb. 4.....	2 " 1 "
Constantinople, Turkey.....	Dec. 31-Jan. 8.....	18 deaths.
Constantinople, Turkey.....	Jan. 8-Feb. 15.....	14 "
Smyrna, Turkey.....	Jan. 28-Feb. 5.....	1 death.

Yellow Fever.

Rio de Janeiro, Brazil.....	Jan. 6-13.....	28 cases, 20 deaths.
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Cholera.

Bombay, India.....	Jan. 24-31.....	3 deaths.
Calcutta, India.....	Jan. 14-21.....	30 "
Madras, India.....	Jan. 21-27.....	2 "

The Hospital Ship Relief.—The hospital ship *Relief* sailed from New York on March 2d for Manila by way of the Suez Canal. We are informed that she had on board an extra force of men of the hospital corps, several assistant surgeons, and an ample supply of medical supplies and comforts. At Manila we are told that she will act as a hospital ship of three hundred beds.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 4th inst., the following papers were presented: Observations upon the Treatment of One Thousand and One Hundred and Twenty-nine Cases of Acute Alcoholism during the Period of my Official Term of Twenty-five Years as the Physician of St. Vincent's Institution, by Dr. Jerome K. Bauduy; and New Therapeutics of the Tympanic Cavity, by Dr. M. A. Goldstein.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Surgery, on Tuesday evening, the 7th inst., the following papers were presented for discussion: Foreign Bodies in Surgery, by Dr. Chauncey P. Smith; and Urinary Infection and how to Prevent it, by Dr. J. Henry Dowd.

The Eastern Medical Society of the City of New York.—At the last regular meeting, on Friday evening, the 10th inst., the programme included the following titles: A Case of Inoperable Carcinoma of the Thyroid Gland, by Dr. E. K. Browd; A Case of Cretinism after Two Years' Treatment, by Dr. A. E. Isaacs; Large Fibroid of the Uterus removed by Morcellation, saving the Organ, by Dr. H. J. Garrigues; Intralaryngeal Medication with an Intubation Tube, by Dr. Louis Fischer; Specimen of a Gangrenous Appendix, by Dr. Abram Brothers; The Differential Diagnosis of Abdominal and Pelvic Diseases in Woman, by Dr. Paul F. Mundé.

Erratum.—In the third line of Dr. Marx's article on The Treatment of Normal Labor, published in our issue for February 25th, for "sharply defined," read *seldom* sharply defined. The word *seldom* was omitted by the author's copyist, and the omission escaped both his detection and ours.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 25 to March 4, 1899:*

HEYL, ASHTON B., Captain and Assistant Surgeon, will close the general hospital at Fort Thomas, Kentucky, and report to the commanding officer of that post for duty.

POWELL, JERVIS L., Major and Surgeon, is relieved from further duty at Augusta, Georgia, and will return to his proper station, Fort Riley, Kansas.

The following officers of the medical department are honorably discharged from the volunteer army of the United States, to take effect March 23d: **GANDY, CHARLES M.**, Major and Chief Surgeon; **MEAKES, EDWARD A.**, Major and Chief Surgeon; **KENDALL, WILLIAM P.**, Major and Brigade Surgeon; **PLECHER, JAMES E.**, Major and Brigade Surgeon; **LEE, HENRY H.**, Major and Brigade Surgeon; **FARRILL, P. J. H.**, Captain and Assistant Surgeon; and **MILLERS, C. L.**, Captain and Assistant Surgeon.

Society Meetings for the Coming Week:

MONDAY, March 13th: New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medical Historical Society (private); New York Ophthalmological Society (private); Boston Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston, Burlington, Vermont, Medical and Surgical Club, Norwalk, Connecticut Medical Society (private).

TUESDAY, March 14th: New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Societies of the Counties of Rensselaer and Ulster (quarterly), N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, March 15th: Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, March 16th: Missouri Valley Medical Association (St. Joseph); New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, March 17th: New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Births, Marriages, and Deaths.

Born.

JELLIFFE.—In New York, on Wednesday, March 1st, to Dr. and Mrs. Smith Ely Jelliffe, a son.

Married.

COCKS—DONNELLY.—In New York, on Tuesday, February 14th, Dr. Edmund L. Cocks and Miss Anna E. Donnelly.

VALADIER—KARTSCHMAROFF.—In New York, on Tuesday, February 28th, Dr. Charles A. Valadier and Miss Regina Kartschmaroff.

Died.

DEANE.—In Hoosick, N. Y., on Tuesday, February 28th, Dr. Horace C. Deane, aged thirty-five years.

HAINES.—In Tucson, Arizona, on Friday, February 24th, Dr. Franklin R. Haines, aged thirty years.

HOWE.—In Troy, N. Y., on Thursday, March 2d, Dr. Elliot C. Howe, aged seventy-one years.

MARTEL.—In Lewiston, Maine, on Monday, February 27th, Dr. Louis J. Martel.

NICHOLS.—In Brooklyn, on Saturday, March 4th, Dr. Hayden Nichols, in the sixty-fifth year of his age.

RANSLEY.—In Northampton, Vermont, on Wednesday, March 1st, Dr. Stephen F. Ransley, in the seventy-sixth year of his age.

RIEDEL.—In Jersey City, on Saturday, February 25th, Dr. Daniel L. Reeve, in the seventy-fourth year of his age.

SHERMAN.—In Yorkton, N. Y., on Wednesday, March 1st, an infant daughter of Dr. William H. Sherman.

SMITH.—In Brooklyn, on Tuesday, March 2d, Elizabeth J. Smith, wife of Dr. Edward P. Smith.

Wood.—In Havana, Cuba, on Friday, March 3d, Dr. James Wood, United States Volunteer, of Newburgh, N. Y., in the thirtieth year of his age.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

(Continued from page 314.)

IX.

RIGHTS AND LIABILITIES OF THIRD PARTIES.

Who are Third Parties.—The term third party, as used in this article, means any interested person other than the patient. While the physician may consider that he is dealing with the patient individually, it happens more frequently than otherwise that third parties are interested, either having rights of which the physician should be informed and prepared to respect, or incurring liabilities which if understood and taken advantage of may conduce to the physician's financial welfare.

Liability of Third Parties for Fees.—In treating this subject, attention will be first given to the question of when third parties become liable to the physician for the payment of his fees.

Liability of Parent.—That the parent is bound to provide for the maintenance of his minor children is a rule of natural law. But the question to what extent the parent becomes liable for necessities furnished to his minor child is one that is sometimes perplexing. When necessities are furnished, either in the shape of goods delivered or services rendered, with the knowledge and consent of the parent, there can be no question about his liability to pay. But it is laid down as a general rule that no action can be maintained against the parent for goods purchased on credit by his minor child, even though they may be necessary, unless the father has expressly or impliedly authorized the credit.

The authority of an infant to bind his parent for necessities, such as food, clothing, and medical attendance, will be inferred from very slight evidence. The following cases will illustrate the principle:

Illustrations.—If a child who is away from home attending school is taken sick, the parent will be liable to the physician for the amount of his bill, authority to bind the father being inferred from the nature of the case.* A girl of fourteen, with the consent of her father, went to live at a place thirty miles distant, where for three years she contracted for, earned, and controlled her own wages, her father neither furnishing nor agreeing to furnish her with necessities; while these circumstances showed that she was emancipated from the duty of service to the father for the time she was so employed, there was no such complete emancipation as to release him from liability to a physician who attended her in sickness, though the father had no knowledge of such attention.†

And so, where a child leaves home through fear of violence, he carries implied authority to bind his father for necessities.‡ But if the child, having no reason to

fear violence or mistreatment, leaves his father's home without the father's consent, for the purpose of seeking his fortune in the world, or to avoid the discipline and restraint so necessary for due regulation of families, he carries no credit, and the father is under no obligation to pay his necessary bills.*

It will be observed that the case above cited, of the girl who left her father's house and had been employed for three years, is not in conflict with this proposition, for in that case the father had given his consent to the employment. If, however, the child, after leaving home against his father's will, being taken sick, returns home and is received by the father, he becomes liable to the physician for medical services rendered to the child at his house and with his knowledge and assent.†

It seems quite well settled by a number of recent decisions that the parent is bound to pay for necessities furnished to his minor child who is living apart from him with his consent when the parent refuses to furnish them.‡

Upon the death of the father, the mother becomes the head of the family, and is bound by the same obligations of maintenance and support as those which formerly bound the father.

In case of separation or divorce it is of practical value to determine whether the father or mother is liable for necessities for the child. While there are general principles of law governing the liability, it will be impossible to state generally where it rests, an examination into the circumstances of the particular case being always necessary. In case of voluntary separation of the parents the father is *prima facie* liable for the support of the children, though they may be in the custody of the mother; but if the mother, without just cause, leaves the father and takes the children with her, no authority is implied to bind him for their support or necessary expenses, her possession of the children being unlawful.§ But should the court, by a decree or order, give her the custody of the children, then her possession of them becomes rightful and the father becomes liable for their support.||

In Rhode Island it has been held that where the mother wrongfully left the father's home, taking a child, the father, by suffering the child to live separate from him with the mother, constituted her his agent to contract for the child's necessities.¶ When a divorce is granted, the custody of the children is usually regulated by decree. If the divorce is obtained by the wife and the husband is shown to be an improper person to care for and educate the child, the court will decree the custody of the child to the mother. Whether or not the father is liable for the support of the child under such circumstances can not be stated generally, for different rules are applied in different States, and in some States the circumstances of the particular case will govern the matter. In such a case the only safe rule for the physician to be guided by is to have an express contract for

* Weeks vs. Morrow, 10 Me., 151; Owen vs. White, 5 Pact (Ala.), 435; Hunt vs. Thompson, 4 Ill., 179; Raymond vs. Loyl, 10 Barb., 483; Walker vs. Loughton, 31 N. H., 111; Reynolds vs. Sweetser, 15 Gray (Mass.), 78.

† Deane vs. Annis, 14 Me., 26.

‡ Dewane vs. Hansow, 56 Ill. App., 575; McMillan vs. Lee, 78 Ill., 413; Porter vs. Powell, 79 Iowa, 151.

§ Hyde vs. Leisinger, 107 Mich., 490.

|| Shields vs. O'Reilly, 68 Conn., 256.

¶ Gill vs. Read, 5 R. L., 343.

* Parker vs. Tillinghast, 19 Abb. N. C., 190.

† Porter vs. Powell, 79 Iowa, 151.

‡ Stanton vs. Wilson, 3 Day (Conn.), 37; Padgin vs. Crum, 8 N. H., 350; Kimball vs. Keyes, 11 Wend. (N. Y.), 32; Walker vs. Loughton, 31 N. H., 111; Van Valkenburgh vs. Watson, 13 Johns (N. Y.), 190.

payment with some responsible party before the services are rendered.

When the child becomes of full age a different rule of liability attaches; the parent then ceases to be under obligation to furnish him with necessities, even though he remains at his father's home. It is true the father may become liable for medical attendance upon his adult child by an implied agreement to pay, but it seems the law places the father of an adult child in the same category as a stranger, and will not find him liable on any less or weaker evidence than that required to fix such liability upon a nurse, friend, or acquaintance. So a request by a father to a physician to attend his son, of full age, and at his house, raises no implied promise on the part of the father to pay for such services.* A married daughter of more than twenty-one years of age came with her husband and child to her father's home; she being sick, her husband requested a physician, to whom he was unknown, to call at the house of the father, saying the father wished him to attend his daughter; the physician called, usually met the father, who expressed great interest in his daughter's welfare, expressed a wish to be present at a consultation which was held, and never in any way disclaimed his liability. The court said: "It is true that a person may not avail himself of the benefit of services done for him without coming into an obligation to reward them with a reasonable recompense. But he can not be said, in the meaning of the law, to avail himself of services as so done when they are not for his individual benefit, nor for that of any one for whom he is bound to furnish them. The acquiescence of one in the rendering of service or benefit to another, not entitled to call upon him therefor, is not equivalent to an acknowledgment that it is rendered at his request. So far as the legal responsibility was concerned, the defendant, though the father of the patient, was a stranger to her and her necessities. He could neither require of her, nor be required upon by her."†

Liability of Husband.—The liability of the husband for necessities furnished to the wife is much more certain than that of the parent for necessities furnished to the child; in the latter case there is a question of authority on the part of the child to bind the parent, but in the former case, if the husband and wife are not separated by reason of the improper conduct of the wife, or by reason of her leaving him against his will, almost the only question that can be raised is whether the goods furnished or services rendered were necessary. If the husband and wife are living apart by mutual consent, and the husband has entered into a contract with the wife to furnish her with a certain amount each month for her support and maintenance and all family expenses, and pays such amount, he will still be liable to a physician who renders services to her at her request, the physician not knowing they are living apart and that the husband makes her a fixed monthly payment in lieu of supporting her.‡

It has been heretofore observed that the patient is bound to pay the physician not only for the first visit which is made at his request, but for all subsequent visits when the nature of the case requires; and if the husband who employs a physician to attend his wife is liable for services rendered throughout the ill-

ness. Should the wife be removed to her father's home during her illness, without the husband's knowledge or consent, he will still be bound to pay the physician whom he employed before such removal for services rendered to the wife at her father's home.* If, however, the husband notifies the physician at the time of the removal that he will not pay for services subsequently rendered to her, the physician can not collect from him without showing by clear and satisfactory evidence that the husband was guilty of gross abuse, neglect, and misconduct justifying such removal.

A physician who attends a woman, supposing her to be a wife, can collect for such services from the man holding himself forth as her husband, even though they are not in fact married.† But, it seems, if the physician is cognizant of the fact that they are not married, he can not collect from the supposed husband, unless the supposed husband employed him to render such services, thus becoming liable upon a direct undertaking to pay.

The liability of the husband for necessary food, clothing, and medical attendance furnished the wife in his absence does not include the services of a clairvoyant who does not profess to be a physician or to have any medical skill or knowledge of diseases or their remedies. The court in passing upon this question said: "It does not appear that the plaintiff (*clairvoyant*) professed to be a physician or to have any medical skill or knowledge of diseases or their medical remedies, and of course it does not appear that he has furnished the wife with any necessities within the rule of law for which the husband can be rightfully charged. The law does not recognize the dreams, visions, or revelations of one in a mesmeric sleep as necessary for a wife, for which the husband, without his consent, can be held to pay. These are fancy articles, which those who have money of their own to dispose of may purchase, if they think proper, but they are not necessities, known to the law, for which the wife can pledge the credit of her absent husband."‡

(To be continued.)

SOME OBSERVATIONS ON THE USE AND ABUSE OF QUININE IN THE GROUP OF FEVERS KNOWN AS "CALENTURA."

U. S. A. GENERAL HOSPITAL, DEPARTMENT OF SANTIAGO, SANTIAGO DE CUBA, February 6, 1899.

To the Surgeon-General, U. S. A., Washington, D. C.

SIR: I have the honor to submit the following report:

Many cases of acute quinine poisoning have been brought to my notice since my arrival in this island. The idea naturally followed that if an investigation and observations could be made with smaller doses of quinine or the use of some other drug, better results would follow. Information obtained from native physicians, whose professional education, skill, and mode of observation could not be questioned, also led me to feel that quinine was often administered unnecessarily in the group of fevers known here as "calentura." It was not

* Boyd vs. Saffington, 1 Watts, 247.

† Crain vs. Bauloume, 55 N. Y., 256.

‡ Lawrence vs. Brown, 59 N. W., 256 (Iowa).

* Downing vs. O'Brien, 67 Barb., 5.

† Bullock vs. Turner, 59 Cal., 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

‡ Furlong vs. Leary, 62 Me., 100.

* Transmitted from the office of the Surgeon-General of the Army.

unusual in a stubborn case to give as high as a hundred and twenty grains of quinine in twenty-four hours and continue the same treatment for four consecutive days; or, as one of the native physicians graphically expressed it, "continue the quinine until you break the fever or the patient dies." Presuming that but forty grains of quinine can be safely administered and absorbed during a period of twenty-four hours, and that this amount must not be too long continued, it is safe to say that more than this amount would act as an irritant to the gastro-intestinal tract, and as a depressor of the nerves of the hæmatopoietic system. When the line of treatment is followed as indicated by the native physicians, the patient is left almost stupefied and in an anæmic and nervous condition, the stomach very irritable, with a distaste for food, and a very tedious and unsatisfactory convalescence follows. That this method of practice had rapidly obtained a foothold among the surgeons on duty with the Fifth Army Corps, and the Department of Santiago, was but too evident. I have personal knowledge of many cases wherein quinine was given *ad libitum*, both as to frequency and quantity, and know personally of several cases wherein from a hundred to a hundred and twenty grains were given daily for a period of from six to eight days consecutively. There are without doubt forms of malaria where quinine must be pushed to the maximum. I refer to those types of congestive and algid remittent fevers where the patient's life is in great danger from profound malarial intoxication. In such cases a hypodermic injection of quinine in combination with urea is much to be preferred, for obvious reasons. The combination of the quinine and urea forms a perfect solution, and, being alkaline, the quinine will not be precipitated when coming in contact with the alkaline juices of the body. So far as my observation has gone, I have met with no case where urea in this combination exerted any deleterious action upon the system. The advantage, therefore, of this combination is self-evident, and it also prevents the enormous dosing above referred to.

Lieutenant-Colonel Havard, chief surgeon of the Department of Santiago, had spoken with me on several occasions concerning the large doses of quinine given in this climate, and had expressed his desire to have an effort made, if possible, to treat a certain number of these cases without the use of quinine or with quinine in much smaller doses.

With the above-stated facts in mind, the following line of medication was begun in one of the wards of this hospital within a few days after I was placed in charge. The cases reported are not so full as I should have wished them to be, for the reasons that the staff of medical officers was small, the number of patients was large, and the facilities at the time for thorough scientific work were wanting.

The cases were grouped into two classes:

Class "A," cases of patients who had not received

previous medication, and wherein after their admission to this hospital no quinine was given, and an original line of treatment adopted and carried out.

Class "B," cases wherein the previous history was obscure and the details of previous medication could not be ascertained, and wherein quinine was given during the patient's stay in this hospital.

Class "A" only will be reported in this paper.

Class "A."

CASE I.—Isaac Morris (colored), civilian employee of the quartermaster's department, admitted October 19th, at 12 M., with a temperature of 100.8° F.; pulse, 100; respiration, 22. Previous history negative. Present illness began with a chill on the morning of the 17th, followed by fever. The paroxysm recurred on the following day and on the morning of admission to this hospital. Patient was given a cold bath and placed in bed on a liquid, sustaining diet. To overcome the existing constipation, half a grain of calomel was given every hour until two grains were taken, followed by a saline cathartic, with satisfactory result. Antipyrine, five grains, was then administered and repeated at 3 P. M. The temperature at 7 P. M. was 99.2° F. On the following day it was normal in the morning and the evening, having risen to 99° F. at noon. The temperature continued normal during his stay at this hospital. All this time the patient appeared comfortable. No other medical treatment was resorted to excepting tonic doses of tincture of chloride of iron. The patient was discharged, recovered, on October 27th. Diagnosis, intermittent malarial fever.

CASE II.—James Gaskill (colored), civilian employee of the quartermaster's department, admitted October 19th, at 12 M. Previous history uninteresting. His present illness began with a severe chill on the 17th, accompanied by nausea and vomiting. These attacks recurred on the 18th and 19th, when he applied for treatment. His temperature on admission was 105.4° F.; pulse, 102; respiration, 28. The temperature was reduced by cold sponge baths given at hourly intervals. Antipyrine, in five-grain doses, was given at 2 and 4 P. M. A saline cathartic was administered with good result. Apollinaris water and Rhine wine were ordered, to combat nausea. At 4 P. M. the same day the temperature was 102°; at 7 P. M. it was 102.8°; pulse, 96; respiration, 22. On October 20th, at 7 A. M., the temperature was 100°; pulse, 80; respiration, 28. Antipyrine repeated. Tincture of chloride of iron, twenty drops, and tincture of nux vomica (Spanish mixture), three-drop doses (this tincture is of treble the strength of the tincture of the *United States Pharmacopæia*), given three times a day. At 12 M. the temperature was 100.6°; pulse, 80; respiration, 28. At 7 P. M. the temperature was normal. There was no chill and the patient seemed to be comfortable. This condition continued until October 28th, when the patient was discharged, recovered. He has been in the employ of the quartermaster's department since then, and has remained perfectly well up to the date of this report, January 10, 1899.

CASE III.—Robert Stanley (colored), civilian employee of the quartermaster's department, admitted October 20th, at 11 A. M. Previous history negative; habits good. Was taken ill with a chill on the morning of admission. Temperature on admission, 101.4° F.;

pulse, 96; respiration, 28. Received a cold bath and five grains of antipyrine. At 5 p. m. the temperature was 102.8°; at 8 p. m., 102°. On October 21st the temperature was normal, and remained so during the entire day. Gave tincture of chloride of iron, twenty drops, and liquor potassii arsenitis, three drops, three times a day, after meals.

22d.—7 A. M., temperature normal; 3 p. m., 100.2° F.; 5 p. m., 104.4°; 8 p. m., 102.6°. No chill preceded this sudden rise in temperature. He received two baths at intervals of an hour. He was constipated; relieved by half-grain doses of calomel administered at hourly intervals until two grains were taken, followed by a saline laxative.

23d, 7 A. M.—Temperature normal. Continued the tincture of chloride of iron and liquor potassii arsenitis. No rise of temperature occurred on the 24th, 25th, 26th, 27th, and 28th, and he was discharged, recovered, on the 28th. Diagnosis: malarial intermittent fever.

CASE IV.—Henry A. Peters (white), civilian employee of the quartermaster's department, admitted October 22d, at 1.30 p. m., with a temperature of 102.4° F.; pulse, 96; respiration, 23. Family history good; denies alcoholism and specific disease. No history of previous illness. Patient received a cold bath, and his temperature fell to 102°. The constipation was relieved with a saline cathartic, with good result. On the following day, October 23d, he received five grains of antipyrine at 9, 1, and 5, the temperature record being 101° at 7 A. M., 101.4° at 12 M., and 102° at 7 p. m. On the 24th, at 7 A. M., his temperature was 99°; at 12 M., 98.4°; and at 7 p. m., 101.2°. The antipyrine was repeated. On the 25th his temperature was normal and remained so all day. He was now placed on tincture of chloride of iron and Fowler's solution, given in combination after each meal, as continuous medication. He was discharged, recovered, on the 29th. When he was seen, a month later, fever had not returned, and he seemed perfectly well.

CASE V.—William Campbell (colored), civilian employee of the quartermaster's department, admitted October 20th, at 3.30 p. m., with a temperature of 102° F. Previous history negative, family history good, of regular habits. Present illness began ten days ago with severe chills and fever every other day. On the morning of admission he had a severe chill, soon followed by marked nausea and vomiting. He was placed in bed, on a liquid sustaining diet, and given five grains of antipyrine at 4 and 6 p. m. The nausea persisting, he was given creosote in small doses with marked benefit. On the 21st the temperature was normal and the patient appeared to be very comfortable. There was no rise of temperature on the 22d. The following day, the 23d, the patient had a severe chill at 2.45 A. M., lasting about twenty minutes. He received half an ounce of whisky and a cold pack. At 7 A. M. his temperature was 101.4°. During the entire day and all during the period of his stay in this hospital the temperature continued normal. He was placed on the Fowler's solution, three-drop doses, after meals. On the 28th he was returned to duty, and when he was last seen, about December 25th, his condition was excellent and the fever had not returned.

CASE VI.—Herbert Graham (white), civilian employee of the quartermaster's department, admitted November 1th, at 4 p. m., with a temperature of 101° F. Previous history negative, family history unascertained. Habits good. His present illness began three days prior

to his admission, with a severe chill followed by fever. The paroxysm recurred every morning. He was constipated and a saline cathartic was administered with good result. A cold bath reduced his temperature to 102° at 6 p. m. On the 8th, at 7 A. M., his temperature was 98°, and remained normal throughout the day. He was given ten-drop doses of tincture of chloride of iron after meals. On the 9th his temperature was normal, and continued so until the 14th, when it rose to 99.4° at 4 p. m., and then five grains of antipyrine were administered. On the 15th, at 7 A. M., his temperature was 99°, at 12 M. 98.8°, and at 4 p. m. 99.2°. Antipyrine was repeated. On the 16th his temperature was normal throughout the entire day, and it continued so until the evening of the 17th, when it rose to 99.6° at 7 p. m. Five grains of antipyrine were administered. From that time on his temperature remained normal till the 23d, when he was returned to the quartermaster's department for duty.

CASE VII.—J. G. Walker (white), civilian employee of the quartermaster's department, admitted November 10th, at 8 p. m., with a temperature of 102.6° F. Family history good. On admission he was placed in a cold bath, the temperature falling to 100° F. Five grains of antipyrine were given. On the 11th, at 7 A. M., his temperature was 99°, at 12 M. 99.8°, and at 4 p. m. 99°. Antipyrine was repeated at 1 and 4 p. m. On the 12th his temperature was normal, and he was placed on Fowler's solution, three times daily, after meals, for continued use. On the 13th his temperature was normal, and remained so until 3 A. M. November 14th, when he had a chill, followed by a temperature of 102°. He received five grains of antipyrine, and at 7 A. M. the thermometer registered 101°. At 12 M. his temperature was 99°, rising to 101° at 4 p. m. Antipyrine was repeated at 3 and 5 p. m. On the 15th, at 7 A. M., his temperature was 99.6°, at 12 M. 98°, at 4 p. m. 98.2°. On the 16th, at 7 A. M., his temperature was 100°, but normal during the rest of the day. From that time on his temperature never went above 98.2°, and he was discharged at his own request on the 20th.

CASE VIII.—Charles Barrett (white), civilian employee of the quartermaster's department, admitted November 12th, at 6 p. m., with a temperature of 102.6° F. He was considerably nauseated and vomited several times. He received a cold bath every hour and five grains of antipyrine every forty-five minutes. His temperature at 9 p. m. was 101°. On the 13th, at 7 A. M., it had dropped to 100°, and at 12 M. to 98°, but rose again at 4 p. m. to 105.2°. He received a cold pack, which reduced his temperature to 101°. Another cold bath at 5 p. m. lowered the temperature to 102.6°. The bath was repeated at 6 p. m., followed by a drop in the temperature to 101.4° half an hour later. His bowels were very much constipated and did not respond to a saline cathartic, which had been administered previously, but moved well after a copious rectal injection. At 5 A. M. on the 14th he had a severe chill followed by a temperature of 102°. Five grains of antipyrine and a cold bath caused a drop in the temperature to 100.2°. At 4 p. m. the same day it rose to 102.4°. On the 15th his temperature ranged from 97.6° to 98.2°. He was now placed on the continued use of iron and at once after meals. The temperature continued normal until the 18th, when it was 99° at 7 A. M., 101° at 12 M., and 101.4° at 4 p. m. He received five grains of antipyrine, and the temperature on the following day had fallen to 97.2°. He was anxious to return to work, and left the hos-

pital, in good condition, on the 20th. He returned a month later with an attack of acute diarrhoea, but stated that he had been entirely free from fever.

CASE IX.—James Belcher, civilian employee of the quartermaster's department, admitted November 20th, at 8 p. m., with a temperature of 105.4°. Previous history not ascertained. States that on the morning of admission to this hospital he had a violent chill. On the 21st, at 7 a. m., his temperature was 99°, and ranged between 98.5° and 98.6° during the day. He was placed on liquid and stimulating diet, but medication was withheld. On the 23d his temperature was normal during the day, and stimulating diet was continued. On the 23d tincture of chloride of iron, twenty drops, was ordered three times a day. On the 23d, 24th, 25th, and 26th the diet and stimulants were continued. His temperature was normal during this period. On the 27th his temperature was normal until 4 p. m., when it rose to 100.4°. There was no chill. On the 28th, at 7 a. m., his temperature was 102.3°; there was no chill. At 12 m. it was 103.6°; at 4 p. m., 103.4°. Antipyrine in five-grain doses was given at 2 and 4 p. m. He had a cold bath and was put on liquid diet. On the 29th, at 7 a. m., his temperature was 100.6°; at 12 m., 101°; at 4 p. m., 102.4°. One five-grain dose of antipyrine was given. On the 30th, at 7 a. m., his temperature was 100.2°; at 12 m., 99.4°; at 4 p. m., 100.6°. On December 1st, at 7 a. m., his temperature was 99.8°; at 12 m., 102°; at 4 p. m., 100.6°. On the 2d, at 7 a. m., his temperature was normal; at 12 m., 99.8°; at 4 p. m., 100.6°. On the 3d, at 7 a. m., it was 102.2°; at 12 m., 100.4°; at 4 p. m., 102.4°. Antipyrine, five grains, was given, also a cold bath. This treatment was continued. On the 4th, at 7 a. m., his temperature was 98°; at 12 m., 98.6°; at 4 p. m., normal. It varied between 97.4° and 98.8° until he was discharged on the 12th.

CASE X.—William J. Coughtry (white), sergeant, Third Company, United States Volunteer Signal Corps, admitted at 5 p. m., November 21st, with a temperature of 105° F.; pulse, 120; respiration, 26. He had had pneumonia several weeks before, which left him with a severe cough. States that he had a chill on the morning of admission, but none previously. At 6 p. m. his temperature had risen to 105.6°. There were some nausea and vomiting and he complained of severe headache. There was some diarrhoea. He received five grains of antipyrine at 6 and 7 p. m., and ten grains of Dover's powder at 8 p. m., followed by one one-hundredth of a grain of digitalin. On the 22d, at 7 a. m., his temperature was normal, at 12 m. 99°, and at 4 p. m. 101.4°. He received five grains of antipyrine. The following morning, at 7 a. m., the temperature was 103°, which was reduced by a cold bath to 101.2°. At 12 m. it was 101.6°; at 4 p. m., 101.4°. Antipyrine was repeated, and the patient perspired very freely. On the 24th, at 7 a. m., his temperature was 100°, and remained so till the following day, when it rose to 102° at 2 p. m. At 4 p. m. it remained high, and five grains of antipyrine were given. On the 26th and 27th it ranged between 100° and 100.6°, falling to 99° on the morning of the 28th. On the 29th, at 7 a. m., his temperature was 99.4°, at 12 m. 100°, and at 4 p. m. 99°. On the 30th the temperature was normal, and continued so until his discharge on December 6th. During his convalescence he was placed on small doses of strychnine and arsenic after meals.

CASE XI.—W. T. Phillips (white), private, Fifth United States Volunteer Infantry, entered this hospital

on November 23d, at 7 p. m., with a temperature of 102.6° F. He received two cold baths, reducing the temperature to 100° by 11 p. m. On the 24th, at 7 a. m., his temperature was 99°, at 12 m. 100°, and at 4 p. m. 103.8°. The bath was repeated and five grains of antipyrine were administered. At 5 p. m. his temperature was 102°. On the 25th, at 7 a. m., his temperature was 101.2°, at 12 m. 103.2°, and at 4 p. m. 105.2°. He received two cold baths at short intervals, followed by a cold pack, which reduced the temperature to 103°. On the 26th, at 7 a. m., his temperature was 100°, at 12 m. 98.6°, and at 4 p. m. 99°. On the 27th and 28th his temperature ranged from 99.4° to 100°. On the 29th it was normal, and continued so until he was discharged, on December 1st.

CASE XII.—Charles W. Ryan, a civilian employee of the quartermaster's department, was admitted on November 23d, at 4 p. m., with a temperature of 104° F. His illness began with a continued fever five days before his admission. A cold bath was ordered, and five grains of phenacetine were administered, resulting in a dropping of the temperature at 7 p. m. to 100.4°. On the following day his temperature was 101.4° at 7 a. m., 99.6° at 12 m., and 101.3° at 4 p. m. The phenacetine was repeated. On the 25th, at 7 a. m., his temperature was 100.2°, at 12 m. 99°, and at 4 p. m. 100.4°. After the 26th it continued normal, and he was finally discharged on the 9th of December.

CASE XIII.—Alonzo Curry, corporal, Ninth United States Volunteer Infantry, was admitted on October 20th, at 11 a. m., with a temperature of 104.8°. His health had always been good until a few days prior to his admission. A cold bath was then given, the temperature being 103.2° at 4 p. m. Five grains of antipyrine were administered, which reduced the temperature to 102° at 7 p. m. In order to relieve constipation, half a grain of calomel was given every hour until two grains were taken. On the 21st his temperature was normal until 4 p. m., when the thermometer registered 103.6°. The antipyrine was repeated at 4 p. m. and again at 5 p. m. At 7 p. m. his temperature was 103.4°. On the following day the temperature had again risen to 103.8° at 7 a. m., at 12 m. to 104°, reaching its maximum at 4 p. m., 104.4°. He had received a cold bath at 12 m., and one at 2 p. m., also five grains of antipyrine at 5 p. m. On the 24th his temperature was 101.4° at 7 a. m., 102.3° at 12 m., and 104.4° at 4 p. m. Two cold baths were given, reducing the temperature to 102° at 7 p. m. The following day the temperature remained normal. As the patient was somewhat constipated, calomel in divided doses was given with good result. On the 26th the temperature was 99° at 7 a. m., 100° at 12 m., and 101° at 4 p. m., falling somewhat after a cold bath. On the 27th the temperature was normal. On the morning of the 28th the temperature had again risen at 7 a. m. to 100°, dropping to 99.2° at 4 p. m. On the 29th it was 99° at 7 a. m., but remained normal during the entire day, and until the 30th, when it rose to 101.6° at 7 a. m. At 12 m. it had dropped somewhat, being 100.6°, but had risen again to 102° at 4 p. m. On the 31st, at 7 a. m., it was 100°, and continued so until November 2d, at 12 m., when it dropped to 99°. At 4 p. m. it was 99.2°. On the 3d, at 7 a. m., it was 102.6°. At 12 m. it was 102°, and at 4 p. m. 100°. On the 4th it remained normal, and continued so till the 5th, at 7 a. m., when he had a chill, followed by a rise in temperature to 101°, gradually dropping to normal. On the 6th the temperature fluctuated between 98° and 99°. On the

7th it rose again to 100° at 7 A. M., at 12 M. it was 99° , and at 4 P. M. 99.4° . On the 8th, at 7 A. M., it was 98.4° , at 12 M. 99.8° , and at 4 P. M. 99° . On the 9th it was normal. On the 10th it rose to 99.4° at 4 P. M. On the 11th, at 5 A. M., he had a chill, followed by a temperature of 100° at 7 A. M. At 12 M. it was 99° , and at 4 P. M. 101.6° . From the 11th to the 21st he was entirely free from fever, but was then taken again with a chill at 12 o'clock, followed by a temperature of 101.6° at 2 P. M. At 4 P. M. it had dropped to 100° . He was given five grains of antipyrine. Now follows another period of intermission, when his temperature was normal and he appeared comfortable until December 1st, when he contrived to overload his stomach, and he became very much constipated, the temperature rising to 102.2° at 7 A. M. and 104° at 12 M. He was given an emetic and an enema with very good result. This was followed by a drop in the temperature to 99.4° at 7 P. M., without any further medication. From this time on, until the 20th, the patient was entirely free from fever, and was finally transferred to duty, fully recovered.

There can be no reasonable doubt that the cases given were all of malarial origin, although clinical data are defective, and microscopical tests were impossible, for lack of a pathologist or facilities for making the necessary examination. The cases cited above were placed in charge of Acting Assistant Surgeon, United States Army, Milton Vaughan. He was also in charge of the typhoid fever and dysentery ward, where he was kept very busy, and consequently neglected to obtain more data in these cases, and he did not regard them as of equal importance with those of his other patients.

The conclusion that may be drawn from these cases is that, in cases of mild malarial poisoning, the patients who received no quinine convalesced more rapidly and the recovery was far more satisfactory than in cases of the same class which had been treated in this hospital with quinine *ad libitum*. I am referring to cases of which I have personal knowledge, some of the patients being still in this hospital, where the average length of their stay had been about three months and quinine was given in large doses long continued. They are still anæmic, with capricious appetites, and their convalescence is very tardy and unsatisfactory. Their sense of hearing and nerve centres are at least temporarily impaired, with a tendency to recurrence of malarial paroxysms.

There are some cases of more profound malarial intoxication which have been treated with quinine not to exceed eighteen grains daily, and this amount not continued longer than three days. Daily tests of the blood have been made by Acting Assistant Surgeon, United States Army, F. W. Fabricius, pathologist at this hospital. Three of these cases are completed, but others are still under observation; and when ten or twelve cases have been completed a further report will be made. Observations will also be continued in the milder form of malarial poisoning along the lines indicated in the paper.

The fact that many of the subjects of sickness occurring during August, September, and October recovered under treatment other than the use of quinine was used by some of the physicians sent here as an argument that all such cases were yellow fever. I mention this circumstance simply to show that the reports of the yellow fever epidemic here in the summer could have been greatly exaggerated if the fact above mentioned had been taken as confirming a diagnosis of yellow fever.

I am under obligations to Acting Assistant Surgeon, United States Army, F. W. Fabricius, pathologist at this hospital, for assistance in collating these cases.

Very respectfully,

[Signed.]

L. C. CARR,

Major and Brigade Surgeon, United States Volunteers, Commanding General Hospital.

Letters to the Editor.

A "PSYCHOPATHIC" HOSPITAL.

44 EAST TWENTY-SIXTH STREET, March 4, 1899.

To the Editor of the New York Medical Journal:

SIR: The establishment of unneeded hospitals and dispensaries in this city and elsewhere has been so frequent in the past that one is tempted to question the motives of the proposers of new schemes. In a daily newspaper a few weeks ago, and again in your journal, the project of inaugurating what is somewhat pedantically and erroneously called a "psychopathic" hospital for the treatment of acute cases of insanity is exploited. Your contributor, Dr. Lyon, the medical superintendent of Bloomingdale Asylum, is the head of an institution which has repeatedly announced its desire to receive only acute cases, and its refusal as far as possible to take those of a chronic nature. It is, or ought to be, in every sense a charitable institution, for it pays no State tax, is richly endowed, and, though it is somewhat inaccessible, because for economic and other reasons it was moved to White Plains, its laudable existence as a hospital for acute cases should fully satisfy those physicians who demand improvements. The State should very properly have nothing to do with the local treatment of the insane poor of New York, any more than it should with the control of the Bellevue, Roosevelt, Presbyterian, Mount Sinai, or St. Vincent's Hospital. What is really needed is an observation and detention hospital, which should be an amplification of the existing pavilion at Bellevue, with certain reforms in management now most urgently needed, including the abolition of the fee commitment system and the severance of any connection between the city institution at the foot of Twenty-sixth Street and private asylums, to which it is often a feeder. The resident and consulting physicians should be chosen after competitive examination, holding their place for a definite term, and all commitment papers should be sent to the Bellevue board. If this were done, one of the objects might be corrected, and the danger of the patients being placed upon such a plan as to be unable to leave, and afford a field for satisfactory chemotherapy.

If conducted on these lines, without the blight of politics, we should not need a "psychopathic" hospital, which under any circumstances is out of place in a noisy city.

ALLAN McLANE HAMILTON, M. D.

ANAPHORIA AND CATAPHORIA.

1427 WALNUT STREET, PHILADELPHIA, March 6, 1899.

To the Editor of the New York Medical Journal:

SIR: With a desire for accuracy, and that credit should be given to whom it is due, I address your columns. In Dr. Ranney's book entitled *Eye Strain in Health and Disease*, on page 35, I note the following: "Terms relating to the muscles which move the eyes" (muscular terms). "These were first suggested by George T. Stevens." I refer especially to the one term, *anotropia*, an actual turning of both eyes upward." Again, on page 59, he says: "Within the past two years the attention of oculists has been drawn by my friend Dr. G. T. Stevens, of New York, to certain abnormal conditions of the orbit in which both eyes simultaneously tend to assume too high or too low a plane in the orbit." If I am not mistaken, Dr. Chalmers Prentice, of Chicago, was the first to call attention in medical literature to the fact that both eyes might tend upward or downward. In *The Eye in its Relation to Health*, page 166, beginning at the fifteenth line, he says: "By considering only the relative position of the two eyes, we are likely to overlook some grave defects in the ocular muscles, for it is possible for both of the superior or inferior muscles to be short, in connection with a relative deviation or relative balance." I do not recall the exact date of Dr. Stevens's article in the *New York Medical Journal* in which he mentions the fact that both eyes may turn upward; I think it was between one and two years after the publication of Dr. Prentice's book. If I am correct in this, Dr. Prentice should be credited with first calling attention to the condition, although he did not give it a name.

SAYLOR BROWN, M. D.

BRONCHOPNEUMONIA FROM THE INHALATION OF A FOREIGN BODY.

SLAYTON, MINN., March 1, 1899.

To the Editor of the New York Medical Journal:

SIR: In a late number of the *New York Medical Journal* there is recorded a case of Bronchitis and Pneumonia following the Inhalation of a Foreign Body, by C. E. Coon, M. D.

I wish to add to the record the following, which occurred in my practice: On December 25, 1897, I was hastily summoned to attend a child eight months old in a paroxysm of coughing, which was caused by a piece of peanut being inhaled. The parents were feeding the child with peanuts, and a part of one was inhaled involuntarily. The child was cyanotic, with increased rapidity of respiration, and in twenty-four hours she had all the symptoms of broncho-pneumonia, with high fever and with sibilant and subcrepitant râles over the left side of the chest. These symptoms persisted for three or four days, when the patient seemed to improve, with slower respirations, lower pulse, and less cyanosis. No further advance toward health was made; the disease was stationary, and the left side of the chest did not clear up. The child was very much emaciated and growing slowly weaker until six weeks after, when,

during a paroxysm of coughing and vomiting, a segment of a peanut was expelled, flat on one surface, convex on the other, and measuring a half by one centimetre. The child was in excellent health in about ten days, and is strong and robust at this time.

HARRY MORELL, M. D.

AN AUTHOR'S COMPLAINT.

1504 PINE STREET, PHILADELPHIA, February 17, 1899.

To the Editor of the New York Medical Journal:

SIR: In your review of my book in the issue of January 7th, your reviewer departs from the recognized custom of expressing more or less correct opinions and loses himself in a series of misstatements of fact to which I courteously call your attention.

1. He says the book is made up largely of quotations from three named text-books on the subject of pædiatrics, of which one is by Starr. Neither my colleague Dr. Wells nor I have seen this work. There is a text-book edited by Starr to which I am a contributor.

2. That these quotations are oftentimes "whole pages in length."

3. That the book "abounds in coined words."

A casual glance at the volume will show the statements to be false.

J. MADISON TAYLOR, M. D.

Book Notices.

Die Krankheiten des Mundes. Von J. MIKULICZ, Direktor der chirurgischen Universitäts-klinik, und W. KÜMMEL, Leiter der Universitäts-poliklinik für Ohren-, Kehlkopf- und Nasenkrankheiten, in Breslau. Mit Beiträgen von A. CZERNY, Direktor der Universitäts-kinderklinik, und J. SCHAEFFER, Privatdozent für Dermatologie in Breslau. Mit 2 lithogr. Tafeln und 62 Abbildungen im Text. Jena: Gustav Fischer, 1898. Pp. ix-253.

It is a pleasure rarely vouchsafed to the reviewer to read and pass judgment upon so satisfactory a volume as the one before us. In the writing of it the general knowledge of an operating surgeon has been combined with that of a specialist devoted to a daily study of the mouth and throat. The senior author regrets the lack of special study of this portion of the human anatomy, and points out that, while we may have throat and nose specialists and dentists, yet no one thinks the tongue and mouth worthy of undivided attention. To fill this blank in medical science and to form the complement of another work by Mikulicz (*Atlas of the Diseases of the Mouth and Pharynx*) are the functions of the present volume. It is divided into a general part, devoted to an anatomical introduction, with suggestions for the routine examinations of the mouth and the general symptoms to be expected in oral diseases, and a special part, in four divisions, allotted respectively to those conditions which involve the mouth as a whole, to conditions localized in a particular part of the mouth, to tumors, and to those diseases especially noticed in children. The first division is chiefly taken up with syphilis and oral tuberculosis. Under leucoplakia we note that the syphilitic origin of the disease is still recognized, or, rather, the disease is now considered a parasyphilitic process, to be more accurate, just as tabes is now classified.

The remainder of this section includes the rarer conditions which may give rise to well-marked lesions in the mouth, among them glanders, leprosy, and actinomycosis. The portion devoted to tumors is, however, the most interesting and instructive. With the exception of the epitheliomata of the lip and tongue and epulis, tumors of this region are comparatively rare, and yet we find seventy-six pages devoted to this subject, every point of which is illustrated by suitable cases from the authors' experience and embellished with many photographs and drawings.

An appendix at the end of the book gives formulae which the authors have found useful for the treatment of the diseases of the mouth. This volume as a whole is a credit to German scholarship and patient research, and as a mere example of the value and methods of recording personal observations should inspire similar results in this country, where they are, unfortunately, altogether too rare.

Leçons de clinique chirurgicale faites à l'Hôtel-Dieu (août-septembre, 1897). Par PIERRE DELBET, Professeur agrégé à la Faculté de médecine, etc. Avec 31 figures. Paris: G. Steinheil, 1899. Pp. 376. [Prix, 8 fr.]

THESE lectures on clinical surgery cover a considerable variety of subjects, from otitis media to contraction of the plantar fascia. The first is devoted to the methods used in the restoration of the congenital defects of the hard palate, and a large part of the article is given up to the discussion of the best age for the carrying out of the operation. Delbet inclines strongly to a late operation, even at the age of six or seven years, but insists that good results are more easily obtainable if the child has had a careful preliminary training, so that it may speak as well as possible before the operation.

An especially interesting presentation is given of the rather hackneyed subject of varicose veins, and the methods of determining the efficiency of the valves in the saphenous, a point of prognostic as well as of diagnostic value, are well described and illustrated. The recent investigations on the congenital absence of these valves as the real exciting cause of the varicosities, appearing perhaps only late in life, are not mentioned. Enough has been said, we think, to show the valuable nature of these recent contributions to surgical literature.

BOOKS, ETC., RECEIVED.

The Retrospect of Practical Medicine and Surgery. A Half-yearly Journal containing a Retrospective View of Every Discovery and Practical Improvement in the Medical Sciences. Edited by James Braithwaite, M. D. Lond., Obstetric Physician and Surgeon to the Leeds General Infirmary, etc., assisted by E. F. Trevelyan, M. D. Lond., B. Sc., M. R. C. P., Assistant Physician to the Leeds General Infirmary, etc. Volume CXXIII. January, 1899. Uniform American Edition. New York: G. P. Putnam's Sons, 1899. Pp. xvi 435. [Price, \$1.50.]

Gout: its Pathology and Treatment. Founded on the Goul-toumian Lectures on *The Chemistry and Pathology of Gout*, delivered by the Author before the Royal College of Physicians of London in 1897; with the Addition of Some Recent Investigations concerning the Treatment of Gout, and a Detailed Account of the Treatment of the Various Forms of Gout. By Arthur P. Luff, M. D. Lond., B. Sc., F. R. C. P., Physician in

Charge of Out-patients, and Lecturer on Forensic Medicine at St. Mary's Hospital. New York: William Wood & Co., 1899. Pp. viii-248.

An Experimental Research into Surgical Shock. An Essay awarded the Cartwright Prize for 1897. By George W. Crile, A. M., M. D., Ph. D., Professor of the Principles of Surgery and Applied Anatomy in the Cleveland College of Physicians and Surgeons, etc. Philadelphia: J. B. Lippincott Company, 1899. Pp. 5 to 160. [Price, \$2.50.]

La photothérapie. Par N. R. Finsen. I. Les rayons chimiques et la variole. II. La lumière comme agent d'excitabilité. III. Traitement du lupus vulgaire par les rayons chimiques concentrés. Publication du *Finsen's medicinske Lysinstitut de Copenhague*. Paris: Georges Carré et C. Naud, 1899. Pp. vi-7 to 99.

Suite de monographies cliniques sur les questions nouvelles en médecine, en chirurgie, en biologie. No. 14. Traitement de la syphilis. Par E. Gaucher, Professeur agrégé à la Faculté de médecine de Paris, etc. Pp. 36. Paris: Masson et Cie., 1899. [Chaque monographie séparément 1 fr. 25.]

Transactions of the Medical Society of the State of North Carolina. Forty-fifth Annual Meeting, held in Charlotte, North Carolina, May 3, 4, and 5, 1898.

Transactions of the American Ophthalmological Society. Thirty-fourth Annual Meeting.

Forty-seventh Annual Report of the Directors of the New York Ophthalmic Hospital. For the Year ending September 30, 1898.

Annual Report of the J. Hood Wright Memorial Hospital. For the Year ending December 31, 1898.

Fourteenth Annual Report of the Adirondack Cottage Sanitarium, Saranac Lake, N. Y.

A Plea for National Medical Legislation. By R. C. Robe, M. D., of Pueblo, Colorado. [Reprinted from the *Denver Medical Times*.]

Esophagotomy for the Extraction of an Impacted Tooth Plate of Six Years and Four Months' Standing. By G. G. Eitel, M. D., of Minneapolis. [Reprinted from the *Northwestern Lancet*.]

Three Cases of Obstruction of the Bowels by Omental Cords. By G. G. Eitel, M. D. [Reprinted from the *Northwestern Lancet*.]

Conservative yet Effective Treatment of Hypertrophied Prostate by Electro-incision done through the Urethra: Presentation of Specimens of Hypertrophied Prostate; Demonstration of Battini-Frendenberg Electro-incisor. By Bransford Lewis, M. D., of St. Louis. [Reprinted from the *Medical Review*.]

Behandlung der Lungentuberculose mit subcutanen Injectionen von Oleum camphoratum oleumale Pharm. Germ. Von Dr. Bruno Alexander, Nervi und Beidenhüll. [Sonderabdruck aus der *Berliner Klinische Wochenschrift*.]

Miscellany.

Subcutaneous Administration of Egg Yolk in Malnutrition. According to Mergel's *Prescriptions for Pharmacy*, A. Muggia (*Scienze e Arti*, xv, 1898, 270) states that egg yolk may be advantageously substituted subcutaneously, instead of feeding, in case of malnutrition in children. For the preparation of the injection, the egg yolk,

obtained from a fresh, carefully washed egg, is mixed with one third of its weight of physiological sodium-chloride solution in a sterilized glass by stirring with a glass rod, and the mixture is then strained through absorbent gauze. The initial dose of the solution is a cubic centimetre, and the injections are to be made in the buttocks or lumbar region. There is no manifestation of local or general reaction, provided that the usual aseptic precautions are taken, and that a light massage is practised after the injection. The quantity injected each time may be increased up to but not beyond ten cubic centimetres, and the duration of treatment depends on the condition of the patient. The number of injections should not, however, be less than twenty. This treatment, it is asserted, rapidly increases the weight of the atrophic child, as well as the hæmoglobin content and red corpuscles of the blood, and much more rapidly than lecithin does when administered similarly.

The Medical Treatment of Appendicular Inflammation.—Dr. Herman B. Allyn (*Therapeutic Gazette*, January 16th) says:

"But even the most enthusiastic advocates of operation decline to operate in certain cases. I very well remember on one occasion calling a surgeon in consultation over a case of appendicitis. There was extensive tympanites but only slight fever, and the pulse was under 100. The aspect of the patient was, however, bad, and the surgeon declined to operate then, believing that if the abdomen were opened the patient would go into collapse and die on the table. He advised the use of Epsom salt until the bowels were freely moved. This suggestion was carried out, and in twelve hours the patient was so much better that it was decided to wait still longer before operation. To make the story short, the patient fully recovered, and then declined operation, until another attack made him again change his mind. It may appear to others, as it seemed to me, that if the moderate use of salines will rescue a patient who is deemed so far gone by a surgeon that he would not survive an operation, it should also be a good treatment for milder cases in which the question of operation is never urgent."

The Pulse and the Blood Pressure.—Dr. George Oliver (*Clinical Journal*, February 1st) thus epitomizes the leading signs of increased and diminished arterial blood pressure. In increased arterial pressure—1. The artery is felt to be full, and can often be rolled under the finger. 2. The tetus or beat of the pulse is prolonged, a quality which is not recognized under a light touch, the swell and duration of the pulsation increasing with the compression. 3. The pulse is only obliterated under increased pressure, the finger, however, very frequently failing to recognize this fact when the calibre of the radial artery is reduced. 4. The hæmodynamometer amplifies all these tactile signs of the pulse, and defines the blood pressure with certainty and accuracy. 5. The blood pressure, arterial and venous, is frequently uniform, or alters but little on changes of posture, and the radial pulse is well sustained when the wrist is elevated above the head (the gravity test). 6. The venous blood pressure may be normal, or may be increased when the peripheral resistance is compensated; or it may be subnormal, or even so low as to be immeasurable when the peripheral resistance is so excessive as to reduce the high arterial pressure to a minimum or to zero in the veins. 7. The second aortic

sound is generally accentuated. 8. The apex-beat is frequently moved to the left of its normal position. 9. The breathing is easily disturbed by slight exertion.

In diminished arterial pressure we have the following signs: 1. The artery is flaccid and can not be felt. 2. The beat of the pulse is short and full, a quality easily recognized under the lightest touch—that is to say, with little more than the mere weight of the finger upon the artery. 3. The pulsation is obliterated under slight compression. 4. On applying the hæmodynamometer the index begins to pulsate under a low pressure, and soon attains its maximum excursion. 5. The blood pressure, arterial and venous, always varies considerably with changes of posture, generally falling with recumbency, but sometimes rising for a time with the assumption of that posture when the arterial tonus is greatly reduced and the radial pulse is greatly lessened, or may even vanish when the wrist is raised above the head. 6. The venous pressure is generally normal, or may be in excess of normal, but is sometimes reduced from diminished *vis a tergo*, and not from obstruction of the peripheral vessels.

The Penalty of being Before the Age.—Dr. Priestley Leech (*Quarterly Medical Journal for Yorkshire and Adjoining Counties*, January) delivered a most interesting presidential address before the Halifax (England) and District Medical Society on The Influence of the Provinces on the Progress of Medicine and Surgery. He quotes Watson Cheyne as saying, in an article on The Progress of Surgery during the Queen's Reign, that three things rendered progress in surgery possible, and these were anaesthesia, asepsis, and a knowledge of surgical pathology. He asks, When did anaesthesia first see the light of day? and answers the question with the names of "Morton and Wells, two provincial Americans, and Sir J. Y. Simpson." "Antiseptic surgery, or its offspring, the modern aseptic surgery, had its birthplace in Glasgow, where Professor Lister (now Lord Lister) was professor of surgery." As to surgical pathology, the author points out how much it owes to a German provincial doctor, Robert Koch.

The author concludes, after lamenting the fact that the country of Jenner should be the first to cast discredit on his immortal work, as follows:

"Before closing this address I should like to say a few words on two thoughts that have struck me during its preparation—namely, the treatment that has often been doled out by the public, and even by members of our own profession, to those who have suggested some new thing, and the immense thanks the public owe to men whose names never appear on the roll of fame. Wells, who first tried ether in 1846, died in prison in New York, and Morton died in poverty, stricken with apoplexy. Sir J. Y. Simpson had to suffer an amount of slander and attacks of all kinds when he introduced chloroform that would have overwhelmed any ordinary man, and one can scarcely conceive that it is not fifty years ago that Spencer Wells was greeted at a London medical and surgical society with shouts of 'Down with the belly rippers.' Since then belly ripping has become quite a popular operation. One is reminded of Heine's words in an introduction to an edition of *Don Quixote*. He says: 'I used formerly to suppose that the laughable character of Quixotry lay in the fact that the noble knight was led to recall to life a long-buried past, and that his poor limbs, or rather his back, came

into painful collision with the actualities of the present. Alas! I have learned since then that it is just as thankless a piece of folly to try to bring the future prematurely into the present, and that any such antagonism to the substantial interests of the day is mounted on an exceedingly sorry nag, and is provided with very rusty armor and a body as easily shattered. A wiseacre will shake his head over one form of Quixotry as much as over the other.* Many a man has learned the truth of these words by bitter experience. The courage which is needed by the pioneers in surgery, more so than by those in medicine, is much greater than the public know. In fact, I think it needs more courage, and that of a higher stamp, to go dead against authority and one's professional brethren than to take part in war. The amount of work which has been done and the number of lives which have been saved by general practitioners is not recorded on the tablets of fame, and one may call them the lost legion of medicine."

Poisonously Pure Water.—The *Medical Register* for February 15th has the following editorial:

"No more startling proposition could well be conceived than the fact, which has long been known to physiologists, that the drinking of chemically pure water—i. e., water containing no dissolved salts or gases—is actually poisonous to the animal organism. The subject is fully discussed by Hans Koeppé in the *Deutsche medicinische Wochenschrift* for September 29, 1898. The purity of water is determined by testing its electric conductivity, and it is found that it is almost impossible to secure it absolutely pure. According to this writer, ordinary spring water has a conductivity of five hundred to six hundred or more on the scale employed, while commercial distilled water has a conductivity of over forty-nine. It is exceedingly difficult to prepare water of less than 2.13. Distilled water is an active protoplasmic poison, due to its property of extracting salts from animal tissues and causing them to swell up by imbibition. When taken into the stomach, it causes a swelling of the gastric epithelium, which is followed by desquamation and the production of a catarrhal inflammation. The practice of washing out the stomach with distilled water is condemned, but were it possible to obtain a really pure water the procedure would be even more injurious. The remarkable fact is brought out that there occur in Nature waters purer than ordinary distilled water. Such, it is asserted, is the water from clear natural ice, and it is to this fact that the gastritis produced by giving patients 'ice pills' to allay nausea is said to be attributable. In the guidebooks it is customary to warn tourists—against quenching their thirst with melted snow and the ice of glaciers. It has been supposed that the danger lay in the temperature of the water from these sources, but, according to Dr. Koeppé, its great purity is the cause of its injurious effects. Melted artificial ice is said to be less harmful. In practical proof of the poisonous qualities of pure water, the writer cites the instance of a spring at Gastein which has for centuries been known as the *Gitterthurnen*, or 'poison spring.' All chemical analyses of this water—and hundreds have been made—have failed to show the slightest trace of any injurious substance, yet it has well merited the name it so long has borne. It now appears that its poisonous qualities are due to its extreme purity! Its electric conductivity is only 3.12, far less than that of ordinary distilled water.

"In view of the facts brought out in the article re-

ferred to, a most pertinent question suggests itself: Within recent years the recognition of the danger lurking in water obtained from natural sources has led to the rather extensive introduction of distilled water for table use, and domestic stills are widely advertised in both medical and lay journals. Now it seems as if the use of such water, while avoiding the danger of imbibing disease germs, exposes the drinker to the equally undesirable alternative of consuming an actual poison. Practically, however, where such water is taken at mealtime, it would, we imagine, be free from danger, as it would at once be mixed in the stomach with food rich in salts. For use at other times it would be a simple matter to add to it a sufficient amount of saline material, and, judging from the published analyses of some celebrated 'mineral waters,' the drinking of which is at least not injurious, this addition need be very insignificant in amount."

Commenting on Koeppé's conclusions, the *Druggist's Circular* for March adds that "any one who has had occasion to wash his eye with the ordinary water knows that the operation is disagreeable, a certain degree of irritability being developed; and if he has also performed the same operation with the same water after adding thereto enough common salt to impart a distinct taste to the liquid, he knows that in the latter case there is little or no disagreeable sensation. That this fact has a bearing on the question at issue seems plain enough."

The Teaching of Physiology in Public Schools.—We have had a good deal to say upon the enforced teaching of so-called physiology in public schools as a mere matter of propagandism among children of the fads of innumerable cranks. The following letter by Mr. S. W. Williston, of the University of Kansas, published in *Science* for January 20th, will give some sort of idea of the value of such "physiology" from the point of view of valuable information:

"At the last biennial session of the Legislature of Kansas there was passed what is known as the State uniform text-book law. A commission was appointed whose duty it was to select the text-books of all grades used in the public schools of the State, which were to be furnished at a stipulated price to all pupils. No other texts than the one selected may be used by any school under pain of severe penalties. The law has now been in force for two years and these books are being used by several hundred thousand pupils. So far as I can learn, specialists or experts were not consulted in the choice of the texts. Wide latitude was given to the commission, the one important stipulation being that the books should be cheap! Protests have been made, but in vain.

The books must be used in every case where prior contracts are not in force. Let us examine the wisdom of the Kansas Solons in one case; I am told that others are like it.

"The text in physiology used in all grammar grades is one by a C. L. Hoxie, whoever he may be. As he is the author of text-books in physics, doubtless his name will be familiar to the physicists of the country. The work had the benefit of revision by two high school teachers of St. Louis. The part of the book on the revision ought certainly to elevate them from obscurity.

"We can sympathize, therefore, with the satisfactory statement by the author that 'it is evident that a thorough knowledge of physiology on a scientific basis can scarcely be estimated. If one has a knowledge of physiology will keep him so. I can be sure the same

knowledge will enable him to regain that priceless treasure—good health.' One must suspect that the author is a confirmed invalid! His definition of physiology is certainly unique:

"Physiology proper naturally divides itself into three departments—anatomy, physiology, and hygiene.' 'Bones, like all other organic structures, consist of cells; the cells are more or less of a hexagonal form.' He seems especially hazy about the lymphatic system: 'The lymphatics perform the office of absorption, chiefly in the skin.' At one time he has the lymph 'poured into the blood through the thoracic duct into the *vana cava* in the neck,' but farther on he modifies this by saying that the lacteals 'terminate in two ducts, which open into the large veins, and finally into the heart,' one on the right side and the other on the left side of the chest! 'The liver performs the double office of separating impurities from the blood and secreting bile.' The 'bile acts as a solvent of the fatty portions of food,' while we are informed that 'fat is an oily concrete substance, composed of stearine and elaine!' One of the chief functions of the saliva is to 'quench thirst,' and the 'epiglottis serves to decaden sound!' Among other 'important facts' the author says that the 'heart of quadrupeds lies in the middle line, and not to the left, as in man.' 'All reptiles have two auricles and one ventricle.' From the fact 'that coagulation is greater in the lower animals' he derives the very interesting conclusion that 'this seems to be a wise provision, since these animals can not stop a flow of blood from a wound by artificial means.'

"But enough. These few examples are chosen almost at random. The book contains more poor English, wild and loose statements of fact, errors, and absurdities than I ever saw before in a text-book of modern times. One might be amused at such stuff, published as 'science,' were it not that tens of thousands of children in this State are compelled to learn it, usually taught by teachers whose ignorance of the subject is greater than that shown by the author himself.

"Everywhere that a moral can be lugged in by the ears or tail the baneful effects of the poison alcohol are urged. Can such a book be expected to serve any useful purpose in teaching the principles of temperance?

"And this is what politics may do for science in the public schools!"

The Germicidal Properties of Blood Serum.—Dr. Franklin Warren White thus sums up his paper based upon a series of experiments conducted in the pathological laboratory of the Massachusetts General Hospital, which experiments are recorded in detail in the *Boston Medical and Surgical Journal* for February 23d:

"1. Human blood serum differs greatly in its germicidal action upon various kinds of bacteria. 2. Our experiments indicate that normal human blood serum is not actively germicidal for the *Staphylococcus pyogenes aureus* or the *Streptococcus pyogenes*. 3. Human blood serum does not lose its germicidal power for typhoid and colon bacilli, even in the late stages of chronic wasting disease. 4. Human blood serum in fatal disease occasionally loses part of its germicidal power for the colon bacillus shortly before death, but more frequently retains the germicidal power for this bacillus for several hours after death. 5. A weakening of germicidal power of the blood serum shortly before death undoubtedly favors an agonal invasion of the body by the colon bacillus."

Death from a Tooth in the Left Bronchus.—Dr. James S. Warrack (*British Medical Journal*, February 18th) records the case of a woman twenty-six years of age who drew in by a forced inspiration a tooth which had just been extracted under gas. Cyanosis, dyspnea, cough, etc., followed, and she had a sensation as of something fixed inside the chest. Complete functional obliteration of the left lung, with exception of some tubular breathing accompanied by a few moist râles at the apex, ensued. Hectic fever set in, and thirteen days after the accident there were marked signs of gangrene of the left lung. She died three days later. At the autopsy the missing tooth was found tightly wedged in the left bronchus, point downward and crown upward, thus acting apparently as a "ball valve." There was no bronchiole given off above the site of the tooth, so that entire obstruction ensued. The whole lung was gangrenous. The right lung was congested and oedematous, with beginning consolidation at the base.

Chancre of the Tonsil.—Professor Dieulafoy (*Bulletin de laryngologie, d'otologie et de rhinologie*, December 31, 1898) concludes a paper on this subject as follows: 1. Chancre of the tonsil is of frequent occurrence, polymorphous in character, and indured with manifold aspects; it is sometimes accompanied by herpes. 2. At times it simulates acute amygdalitis. The analogy between chancre of the tonsil and acute amygdalitis is all the greater from the fact that the symptoms are nearly identical. Sore throat even to the extent of accentuated dysphagia, rigors, fever, and extreme lassitude are symptoms common to both diseases. 3. Whatever be the appearance of chancre of the tonsil, whether it presents the appearance of a large follicular amygdalitis, is erosive, ulcerative, vegetating, diphtheroid, whether it is accompanied or not by rigors, fever, malaise, etc., symptoms not noticed as occurring in chancres of other regions, there are three signs which justify a diagnosis of chancre of the tonsil. These three signs are: (a) the unilateral nature of the lesion; (b) the induration of the tonsil; and (c) the presence of the characteristic glandular induration. In face of a lesion of the tonsil which appears suspicious—eroded, excrecent, or ulcerated—in face of an acute amygdalitis whose characters are any way unusual, we should always think of a syphilitic chancre of the tonsil if we wish to avoid a serious error of diagnosis. 4. The diagnosis is definitely confirmed by the appearance of the roseola and mucous syphilides.

The Theory of the Action of Lysins.—According to Dr. Carl Fisch (*St. Louis Medical Gazette*, February), P. Ehrlich and F. Morgenroth (*Berliner klinische Wochenschrift*, 1889, No. 1) say that, as is well known, the so-called Pfeiffer's phenomenon consists in the fact that cholera or typhoid germs, when introduced into the peritoneal cavity of animals, immunized against the respective infections, are immediately agglutinated and very soon transformed into minute granular bodies, which become a prey to the phagocytes or otherwise disappear. The same effect is obtained when the germs are injected into fresh animals, if some immune serum is added to them. *In vitro*, too, this dissolution of the bacteria can be observed, provided that the serum is quite fresh. Pfeiffer's explanation is this: The bactericidal substances in an immune serum are, as a rule, in an inactive condition, and need for the displaying of their potency a certain something that makes them

active and that is contained in the fresh serum and fresh body juices. Pfeiffer conceived the idea of comparing this process with digestion. Later, Bordet reported experiments with the blood of guinea-pigs treated with rabbit's blood, which had the property of dissolving the red blood-corpuscles of rabbits, a property not possessed by normal guinea-pig blood.

The author of this article utilized the blood of a goat, which had been treated for some time with blood serum of wethers, for a series of exceedingly fascinating experiments. This serum dissolved rapidly the erythrocytes of wethers' blood. Heated to 50° C. for half an hour, it lost this faculty and became inactive, but was rendered active again by the addition of a little fresh serum (from goat or wether). It was seen that this hemolysis, too, was due to the action of two substances, the one called "immune body," the other called "addiment" (addition). In accordance with Ehrlich's toxine-antitoxine theory we must conclude that the immune body dissolved in the goat's serum was being combined with the red corpuscles of the wether's serum. A number of experiments, to enter into which would lead too far here, made to establish this proposition showed absolutely positive results and made it clear that the immune body possessed a haptophorous group, which bound it to the wether's erythrocytes. Similarly it could be demonstrated that the "addiment" had no affinity whatsoever to the red cells, and did not combine with them under any conditions. Further investigation finally led to the assumption that the immune body contained two different haptophorous groups; one, which had a very great affinity to the corresponding haptophorous group of the red corpuscle, and another one of very slight chemical energy, which was able to take hold of the addiment present in the serum.

Since it is possible to demonstrate the same conditions in the construction of some enzymes (chymosin), and since the bacteriolysis as well as the hemolysis remind one very strongly of digestive processes, we are justified in concluding that the addiment is a digestive enzyme. We know that digestive ferments are normally present in any serum; owing to their slight amount they can not exert any effect, which, however, it becomes possible for them to do when, by the action of an immune body, they are brought into direct contact with a bacterium or an erythrocyte. The question, how many different ferments we ought to assume, is open, yet it would be sufficient to assume only one, while the number of the different immune bodies may be endless.

By looking at the phenomena described from this point of view the very obscure formation of lysins or bacteriolytic substances is at once transparent. It is nothing else but another form of "seithenketten" (lateral groups) production; while for the binding and assimilating of the comparatively small toxine molecule one haptophorous group (the antitoxine *seithenketten*) is sufficient, the conditions are different whenever large protein molecules or even whole cells (bacteria, red corpuscles) are to be digested (to be assimilated, to be made innocuous, etc. all these different expressions mean the same thing). These bodies as such are unavailable for the use of the body cells on account of their size; they must be first split up by fermentative processes. It is a very ingenious method, therefore, that the "lascos" of the protoplasm (the mucous bodies, etc.) at the same time are lascous ferment molecules, bringing them in intimate relation with the prey to prepare it for the final use of the protoplasm. It is

a wide view, again, that opens up before us through Ehrlich's genius; a hitherto perfectly inaccessible territory has been opened by it for cultivation.

The Uses of Apomorphine.—Dr. G. B. Malone (*Memphis Medical Monthly*, January) reports the efficient use of apomorphine in spasmodic asthma, the dose being one twentieth of a grain *per os*; in hysterical convulsions, one tenth of a grain hypodermically; in the convulsions of childhood, one twentieth of a grain being given to a child two years and a half old; and finally, in puerperal eclampsia, using an initial dose of one tenth of a grain.

The Relation between Chronic Appendicular Inflammation and Movable Right Kidney.—Dr. George M. Edelblom (*Post-graduate*, February) thus sums up his conclusions on this subject:

"Chronic appendicitis, as proved by the writer's clinical and operative work, is present in from eighty to ninety per cent. of women with *symptom-producing* movable right kidney. This frequency constitutes chronic appendicitis one of the chief, if not *the* chief, symptom of movable kidney. Chronic appendicitis, by reason of its frequency, the protracted suffering and serious impairment of health which it entails, and the dangerous possibilities of implanted acute attacks of appendicitis, may be considered the most important complication of movable right kidney. The writer's statistics show that twenty per cent. of all women have movable kidney or kidneys; that four per cent. of all women have *symptom-producing* movable kidney or kidneys; that four per cent. of all women have appendicitis; that, while three and a half per cent. of all women have both *symptom-producing* movable kidney and appendicitis, only one half per cent. of all women have appendicitis and well-anchored kidneys. The startling nature and importance of the conclusions to be drawn from these statistics does not invalidate the latter. Satisfactory investigation of the relations of movable kidney and appendicitis became possible only after the discovery and elaboration of the writer's method of palpation of the vermiform appendix. It remains impossible to those not practically familiar with the method. Chronic appendicitis may be the *only* symptom of movable right kidney. Some of the symptoms commonly ascribed to movable kidney are often in reality due to the concomitant appendicitis. The relations existing between movable *right* kidney and chronic appendicitis are those of cause and effect, for reasons detailed in the paper. A movable *left* kidney never produces appendicitis. Movable *right* kidney probably produces chronic appendicitis by indirect pressure upon the superior mesenteric vein, the return circulation of the appendix being hampered by compression of the vein between the head of the pancreas and the superior mesenteric artery. Appendicitis associated with movable kidney has a tendency to resolution or spontaneous cure, with the formation of a normal appendix, while the same is not true of movable. The only reason for this is that, under these conditions, is by slow process and in a small percentage. In twelve of the writer's cases, the movable right kidney and appendicitis were cured by the operation, only ended in resolution of the appendix. In twenty cases, after right or bilateral nephrectomy, the movable kidney attention to the appendix. Resolved spontaneously after right nephrectomy, but the expected cure occurred, which the associated chronic appendicitis was of comparatively recent origin. In a majority of cases, even of asso-

ciated movable right kidney and chronic appendicitis will either nephropexy alone, or appendectomy alone, meet all the indications. The majority of patients require both operations to restore them to full health. Both operations, right nephropexy and appendectomy, may be simultaneously performed through one and the same lumbar incision extending along the outer margin of the erector spinae muscle from the twelfth rib to the crest of the ilium."

A Hydatid Cyst of the Parotid.—M. Morestin (*Gazette hebdomadaire de médecine et de chirurgie*, February 16th) recently showed to the French Anatomical Society a hydatid cyst of the parotid which he had removed from a woman fifty years of age. The clinical evidence was that of a mixed tumor, but the removal of the tumor demonstrated its real nature.

Discharge of Large Vesical Calculus without Pain.—Dr. H. B. Stewart (*Georgia Journal of Medicine and Surgery*, February; *Virginia Medical Semi-monthly*, February 24th) reports the spontaneous expulsion of a stone weighing two hundred and twenty grains from the bladder of a white lady, aged seventy-six years, without any pain being complained of. The only trouble she experienced was a frequent desire to be over the chamber for about one week beforehand. The doctor has the stone in his possession. It measures an inch and three quarters in length and an inch and a half in circumference.

Acetanilide in Surgery.—Dr. M. D. Schmalhorst, of St. Louis, writes to us as follows: "At a boiler explosion two boys received numerous minor injuries, besides two very severe ones. On one there was a six-inch scalp wound, with fracture and depression. Hair, straw, and all sorts of dirt were carried down and pinched between the bones. The skull had to be removed to the extent of two inches by two inches and a half in diameter. The scalp wound was very ragged and turned back on each side for two inches. A branch of the meningeal gave considerable trouble. Some gauze was used here, packed against the bleeding point. Otherwise acetanilide was the dressing. The whole wound was kept literally stuffed full, about two ounces being used at each dressing. The result was all that could be hoped for.

"A compound, comminuted fracture of the leg came out most beautifully with the same dressing.

"I have used it exclusively for three years. It is very cheap, it is non-toxic, and it can and should be used bountifully to get its absorptive qualities. It will clear up an infected wound quicker than anything I have ever used either in hospital or in private work."

What is Fame?—The *Gazette médicale de Paris* for February 14th speaks of Dr. S. Weir Mitchell as "Dr. Weir Mitchell" and "Dr. Weir Michel," and of one of his stories as entitled "*Hugh Wynne*."

The Western Ophthalmological, Otological, and Laryngological Association. At the annual meeting, held in New Orleans on February 10th and 11th, the following officers were elected for the ensuing year: President, Dr. William Schipperell, of New Orleans; vice-president, Dr. M. A. Goddard, of St. Louis, and Dr. H. V. Wurdemann, of Milwaukee; secretary, Dr. F. C. Ewing, of St. Louis; and treasurer, Dr. W. L. Dayton, of Lincoln, Nebraska. The new members elected were as follow: Dr. J. A. Caldwell, of McKinney,

Texas; Dr. O. Joachim, of New Orleans; Dr. W. H. Baldinger, of Galveston; Dr. J. S. Mott, of Kansas City; Dr. J. S. Lichtenberg, of Kansas City; Dr. J. W. Bettingen, of St. Paul; Dr. J. W. Chamberlin, of St. Paul; Dr. H. M. Starkey, of Chicago; Dr. R. Brunson, of Hot Springs, Arkansas; Dr. Max Thorne, of Cincinnati; Dr. J. W. Scales, of Pine Bluff, Arkansas; Dr. E. M. Singleton, of Marshalltown, Iowa; and Dr. F. C. Ewing. The following names were added to the list of honorary members: Dr. George E. Stevens, of New York; Dr. St. Clair Thompson, of London; Dr. R. Coen, of Vienna; Dr. E. J. Moure, of Bordeaux; Dr. J. Sendziak, of Warsaw; Dr. Marcel Natier, of Paris; Dr. C. Ziem, of Dantsic; and Dr. A. A. Guye, of Amsterdam.

The National Guard of the State of Pennsylvania.—We learn from the *Medical Bulletin* that its editor, Dr. John V. Shoemaker, has been appointed surgeon-general of the guard.

A Lawyer on Medical Expert Testimony.—Mr. Henry Wollman, of the Kansas City Bar, recently delivered a notable address before the Kansas City Academy of Medicine. In the course of his remarks he said:

"The most important thing for a witness is to impress the judge and jury with his absolute sobriety of thought, his earnestness of purpose, and his unquestioned sincerity. The average physician permits himself, on the witness stand, to be drawn quickly into a fencing match with shrewd counsel, and, while it is true that the doctor often gets away with the lawyer, because he knows more about what he is talking about than the lawyer, and is often able to crack an exceedingly biting, bitter, and galling joke at the lawyer's expense, still every time he does it he has weakened himself with the jury. They regard him as a sharp man, and, as a rule, people do not readily trust sharp men."

"When the temptation is on you to crack a joke on the witness stand, remember that, as a rule, we laugh at jesters when that becomes their predominant characteristic, but we do not have any great amount of faith in them. Take the clown in the circus, take the comedian on the vaudeville stage; he makes you forget your troubles, your trials, and your tribulations; he makes your very sides split with laughter, but you don't care to associate with him. You rather pity him."

"Naturally and necessarily lawyers understand human nature thoroughly. Next to their knowledge of the law, their knowledge of human nature is their most important stock in trade, and they know that if they can provoke a doctor into saying sarcastic, sharp, savage things, or cracking jokes, they have robbed his testimony of its most important qualities, and have destroyed its influence with the jury."

"The witness, testifying as an expert, must be cautious, careful, serious—old-fashioned, you might say—about what he says, and he will carry conviction. Let the jury think you are a little slow, if they only think you are honest and sincere and know what you are talking about.

"The next objection that I would urge to a great deal of testimony is the unfortunately vain desire of many of the younger professional men to show off. They allow their desire for ostentation to get away with them. They answer questions by delivering essays, when a short 'yes' or 'no' would do just as well. They use big words; they endeavor in any and every way to impress upon the jury that they are the real thing, and

erful within and of themselves that the Golden Rule is recognized by even their worst member as an absolute necessity, if he wishes to stay in. Of course, you can not be as powerful as they are, because a man can practise medicine without being a member of a recognized medical society, but you can do much more than you now believe."

"Whatever legal measures are passed by legislatures will be evaded as easily as our present method of having the court appoint an examiner. The remedies must come from within societies like yours. Let me suggest this—that each of your medical societies appoint five or six members who shall act as experts, say, for a term of six months, and none of whom shall ever see anybody with a view to becoming an expert witness, except when he is acting as a member of your committee, and then say that three members of the committee shall go together to make the examination. Require the party who wishes the expert testimony to deposit a reasonable sum with your treasurer, and let that money be the sole compensation of the committee for making the examination, except what the law allows them as ordinary witness fees, and then let every other member of your societies refuse positively and unequivocally to do anything with a view to becoming an expert witness. The parties will then be driven, if they want eminent experts, whose worth will be recognized, to get them through your societies. The party who applies to you for the services of your experts must be exceedingly sure of his case, for your committee, being absolutely fair and impartial, will not have any reason or motive for favoring him, and will not do so. The man pays just as much for an unfavorable as for a favorable decision. The committee will have nothing to gain by going on the stand. Their pride and honor can be relied upon not to turn a man down just to get out of going on the witness stand. A man will always be sure he can get the best quality of expert testimony in a straight case. In a crooked case he will be unable to buy it from physicians of recognized standing.

"The courts undoubtedly, when application is made to them to appoint medical experts to make a physical examination of a witness, under our present practice, would recognize your committee. The courts fully recognize bar associations, although seldom incorporated, and when a man applies for admission to the bar the court appoints the examining committee for the bar association to conduct the examination. I have never known of a case where the court has admitted a man whom the bar association committee reported unfavorably, or refused to admit one whom this committee reported favorably. So I think that there will be no trouble in getting all the courts to say that they will never appoint any physician to conduct these examinations unless he is a member of the regular committee of a recognized medical society, and, as this matter as to who shall be appointed lies in the discretion of the court, the courts could legally make and enforce such a rule. Even if the courts didn't recognize your committees, as I am quite sure they will, still, they couldn't force any member outside of your committee to look at a case with a view to becoming a witness.

"As a business proposition, it has always seemed to me that a busy physician really lost money by becoming an expert witness; that is, the length of time that he put in in visiting the case, consulting the lawyers, waiting around the court room, and testifying, did not make it at all profitable for him; so that I think there will be

no loss of money to you by your failure to become expert witnesses, and it seems to me that the proposition I have just advanced, if your societies would be rigid, and your members would recognize their authority, as they undoubtedly will, would be a great cure for the evil that is certainly disgracing your profession."

"Now, shall it be said that a learned profession like yours, composed of cultured, educated, refined gentlemen, in this age of commercialization, has become commercialized to the extent that it itself has become the object of barter and its members the subjects of purchase and of sale? No. Let it be the constant aim of every member of the profession to stop this thing, and to make it impossible for any one to get any physician to go upon the witness stand, not as the impartial, judicial narrator of what, because of his learning and skill, he is able to see where the eyes of the less experienced and more unlearned can discern nothing, but as the paid, partial, and biased advocate of one, who thus puts a price upon his honor."

Abdominal Section under Cocaine Anæsthesia.—

Dr. Hunter Robb (*Cleveland Medical Gazette*, February) records the following case, which is of interest for several reasons. Quite an extensive operation was performed under cocaine anæsthesia; the abdomen was opened, the adherent retroverted uterus was released, brought forward, and stitched to the abdominal wall. As a result the patient was entirely relieved of the local symptoms—namely, the backache and pelvic discomfort of which she had complained for over a year. At the same time her general condition improved, the cardiac symptoms became less pronounced, and the goitre diminished considerably in size.

In order to relieve the pelvic condition it was decided to release the adherent uterus. The operation was performed on October 10, 1898, at Lakeside Hospital. Owing to the general condition of the patient, who suffered from cardiac trouble associated with goitre, it was thought better to employ local anæsthesia. Eight minims of a five-per-cent. solution of cocaine having been injected beneath the skin, an incision was made in the median line down to the muscle sheath. Eight minims more were injected at different points along the median line into the muscular structures, and the incision was then carried into the peritoneal cavity. The adhesions binding the uterus down to the rectum were separated without any apparent discomfort to the patient. It is to be noted, however, that even slight traction upon the ovaries seemed to produce considerable pain. The uterus was brought forward and stitched according to the ordinary suspension method. The peritoneum was closed by means of a continuous catgut suture; chromicized catgut being used for the fascia and a continuous subcutaneous catgut suture for the skin incision. The patient made an uninterrupted convalescence and left the hospital November 8, 1898, twenty-nine days after her admission. At the time of her discharge she was entirely free from backache and from all pelvic discomfort. The circumference of the goitre on October 20th was thirty-three centimetres (thirteen inches) and on October 25th 31.8 centimetres (twelve inches and a half). When she left the hospital on November 8th, it measured twelve inches, a reduction of one inch in twenty-nine days. The pulse at the time of her admission varied between 106 and 150. After the operation the rate gradually diminished and at the time of her discharge it averaged about 101.

Original Communications.

ON A POLYMORPHOUS CEREBRAL TUMOR

(ALVEOLAR GLIOMA?)

CONTAINING TUBERCLES AND TUBERCLE BACILLI

By CLARIBEL CONE, M. D.,

PROFESSOR OF PATHOLOGY, WOMAN'S MEDICAL COLLEGE, BALTIMORE

[From the Pathological Laboratory of the Johns Hopkins University and Hospital.]

(Continued from page 336.)

THE case about to be reported occurred in the service of Dr. Cohen, of Bay View Asylum, and was brought to the pathological laboratory of the Johns Hopkins University by Dr. Henry J. Berkley, to whom I am indebted for the brief clinical notes and the autopsy record.

Clinical History.—X. Y., aged approximately sixty-five years, was admitted to the W. F. H., Bay View, November, 1897, and died three days after. When admitted the woman had full consciousness, but was totally unable to enunciate, nor was there any history that accompanied her. She gradually became comatose, and died in the coma.

Autopsy Record.—The autopsy was negative, except as regards the brain. In the left temporo-sphenoidal lobe was found a tumor, deeply situated (Fig. 1). It was about three by four centimetres in size, and had an area of necrotic tissue surrounding it about half a centimetre in width. The tumor occupied about two thirds of the left temporo-sphenoidal lobe, corresponding with the second, the lower portion of the first, and the upper portion of the third temporal convolutions.

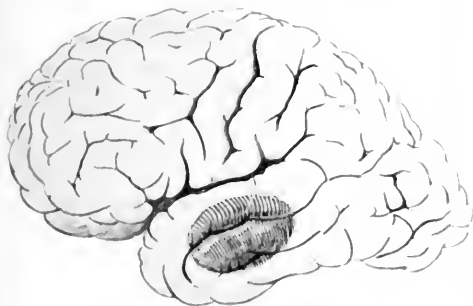


FIG. 1.—Diagram of brain with tumor in situ.

It extended inward, pressing upon the convolutions of the island of Reil. Only at one point did the tumor protrude the surface. The necrotic area was more appreciable toward the upper portion of the lobe toward the interior region. There were no metastases in the brain or other organs, nor was there any evidence of tuberculous.

Naked eye.—*Appearance of Alcohol hardened Specimen.*—The tumor is an irregularly lobulated mass of smooth surface, and covered by a membrane from which project numerous filamentous processes. The

color is grayish white, its consistence is firm and elastic. On section through the mass the cut surface presents an opaque yellowish-white color, dotted and streaked with fine lines of translucent gray (Fig. 2). This gray substance finds a marked development in the centre, where it forms a trabeculated network. Within the gray substance are several small circumscribed areas of necrosis (Fig. 2, N). At one point the tissue is

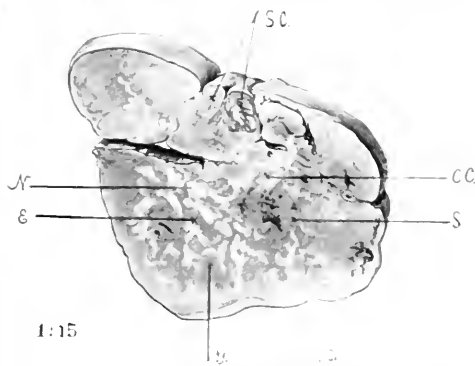


FIG. 2.—Cross section of tumor after alcohol hardening. Enlarged four times. S, C, area resembling simple carcinoma; C, C, area resembling carcinoma with large branching alveoli; S, area resembling simple carcinoma; E, G, and G, areas resembling glioma; E, area resembling endothelioma; N, area of necrosis.

soft and spongelike, despite alcohol hardening. From this spongelike tissue the capsule can be removed with moderate ease, but at other points it is firmly adherent.

Histological Examination.—Serial sections were made, and many slides were stained by the following method: 1. Haematoxylin and eosin. 2. Mallory's phosphotungstic-acid-haematoxylin. 3. Mallory's phosphomolybdic-acid-haematoxylin. 4. Van Gieson's picric-acid-fuchsin. 5. Weigert's iron stain. 6. Gabbet's carbol-fuchsin. Unstained specimens were also examined in glycerine. The sections stained with haematoxylin and eosin are most satisfactory as presenting the greatest variety of lesions. The following description, however, is the result of the examination of many sections stained by the different methods.

With low magnification the capsule extending completely around the tumor, dipping down between its convolutions, and sending processes into the mass, whose structure is thus broken up into more or less imperfect lobes. The capsule is closely connected with the tumor in one place, quite separated in another, but for the most part it is very lax. In some places it is more or less honeycombed, and is completely fibrillated at other points. Here and there it tapers off to a minute strand. At one point it is split in the center, and contains a few strands of lamellar tissue.

Of the numerous small nodules scattered throughout the periphery of the tumor, only a few are seen. They have the appearance of small, rounded, or oval, necrotic foci.

The tumor is composed of two main parts. The outer part is a thin, translucent, yellowish-white, and the type of the tumor is the same. The inner part is a thick, opaque, yellowish-white, and the type of the tumor is the same.

type of growth to another. Where the lobular character is lost these transitions are most marked.

Of the lobules, the structure in some places resembles that of simple medullary carcinoma (Fig. 3). It is made up of alveoli containing many hundred cells and surrounded by a very cellular stroma, which is continuous with the processes extending in from the

times they are lined by high cylindrical cells, at other times by low cuboidal or polyedral forms.

One nodule imbedded in the tumor is made up of a sarcomalike tissue containing giant cells (Fig. 5, *a*). It is diffusely cellular in the centre, but this diffuse cellular growth can be traced as a transition from alveoli in the periphery of the nodule.

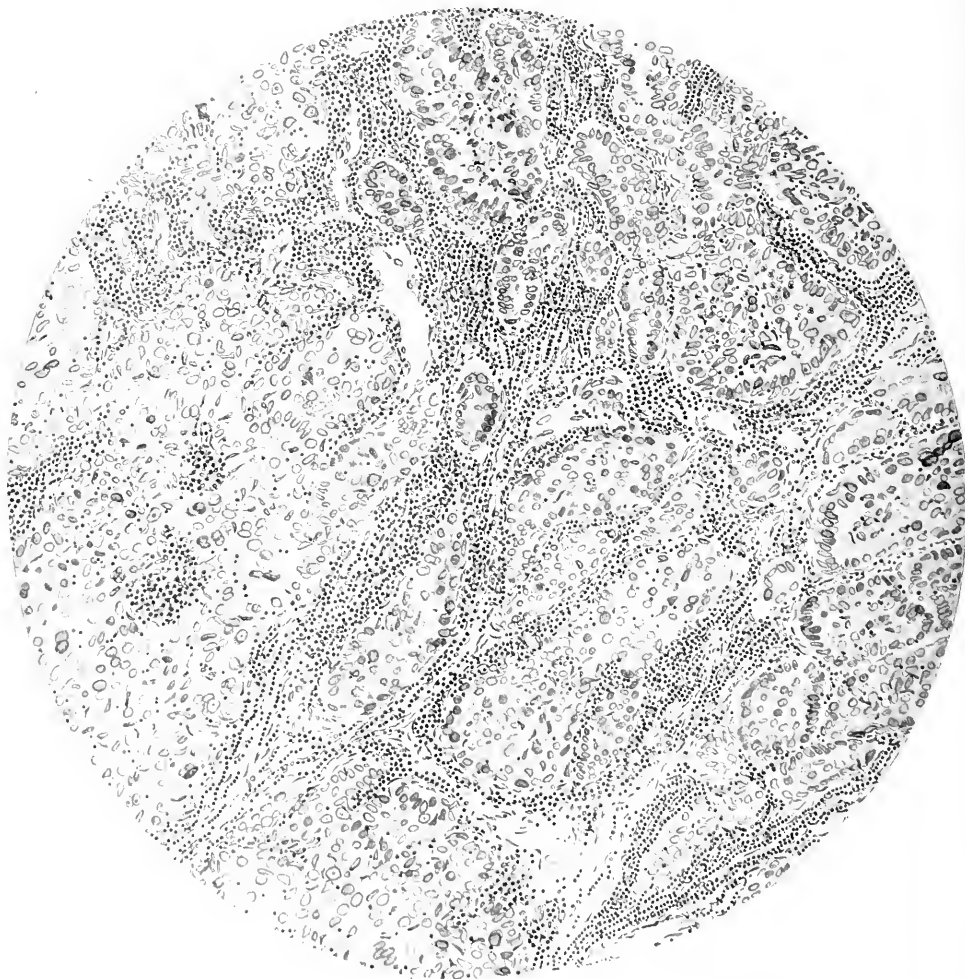


FIG. 3.—Alveoli and fine simple medullary carcinoma. Hematoxylin and eosin stain. Zeiss objective A A, ocular No. 3.

capable. The alveolar structure is made conspicuous because of the difference in the character of cells in alveoli and stroma. In some places this structure is emphasized by a distinct peripheral border of high cylindrical cells.

In other lobules the type of growth is that of tubular carcinoma or of adenoma (Fig. 4, *a*). The tubules sometimes contain a lumen, at others not. Some-

This nodule is partly surrounded by a wedge of tissue, made up of large branching alveoli which are lined by close-set cylindrical cells and are distinctly marked out by a fibrillated stroma (Fig. 5, *b*).

Toward the centre of the specimen, where the lobular arrangement is lost, are numerous blood-vessels, each surrounded by a distinct collar of cells which extend inward as far as to the intact intima (Fig. 6). These

stand out conspicuously against a loose-meshed reticulum and give the impression of perithelial angiosarcoma or endothelioma. There are also vessels not so surrounded, and the cell groupings may extend away from the vessels into the tissues, where they become continuous with the tubular alveoli above described or resolve themselves into a diffuse cellular tissue.

with the cells, nor, indeed, do typical neuroglia cells occur.

Thus, of the many histological types of which this tumor is composed each one may be traced as a transition from some other. There are focal areas of necrosis and other features which can be best studied with greater magnification.

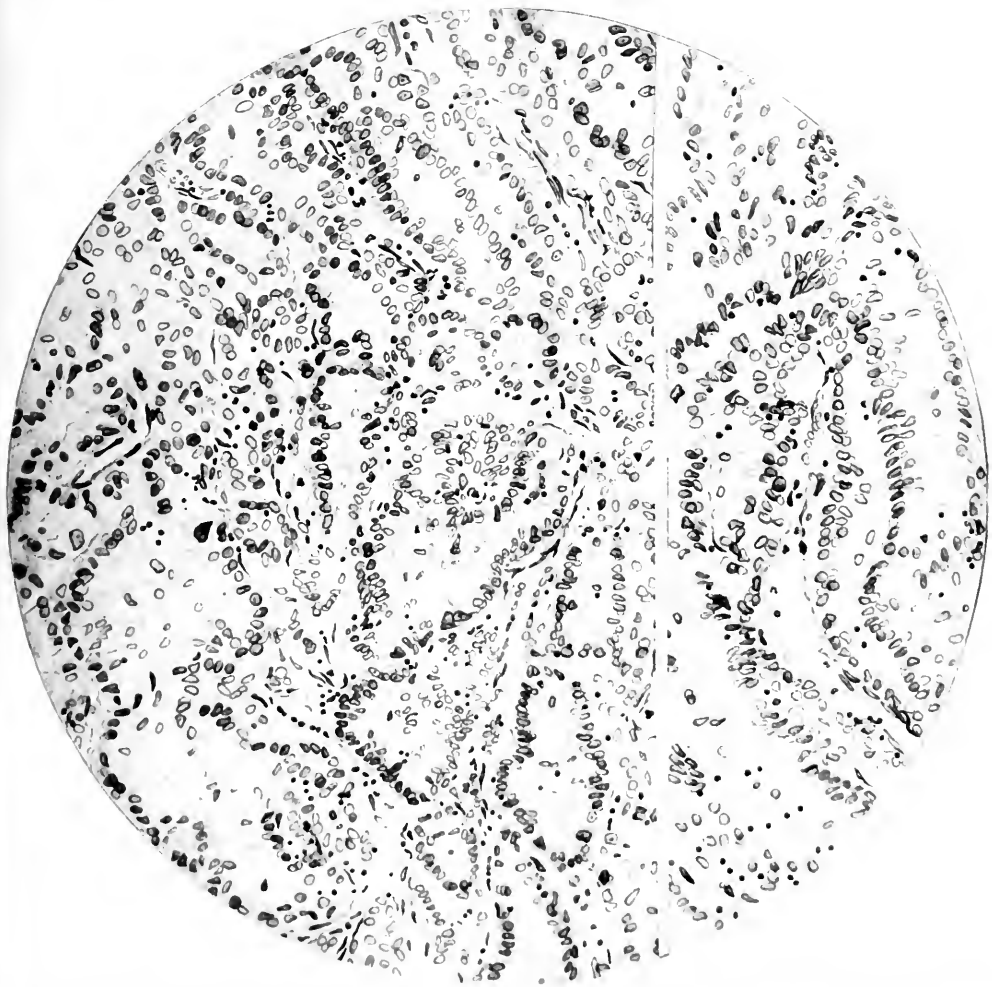


Fig. 1. *a*, Area resembling tubular carcinoma. *b*, blood vessel with red-stained endothelium. *c*, double row of cylindrical cells. H. & E. stain. Counterstain: blue. Magnification: $\times 100$. A, color No. 5.

In other areas there is a diffuse arrangement of small polyhedral cells mingled with highly refractive fibres. The high refraction is especially noted in unstained sections mounted in glycerin, and is sometimes seen in these sections stained with hematoxylin and eosin. This appearance is suggestive of fibrin fibres, and gives the impression of ghema formation. But at no time are the fibres found to be continuous.

Under the high power the tumor was found to be made up of fibrillated connective tissue arranged in parallel lamellae, between which were many small round cells. These cells extended in a row along the fibrous processes that divided the tumor lobules. Thence they extend into the interlobular stroma about the alveoli. They extend into the alveoli at times, producing a diffuse infiltration with tumor cells.

(Figs. 3 and 4). Accompanying the lymphoid cells are sometimes epithelioid cells, and an occasional giant cell with homogeneous protoplasm and peripheral arrangement of its nuclei.

These cells are sometimes grouped into discrete microscopic tubercles, which are mostly confined to the stroma, but at times involve the alveoli. When within

necrosis. Pyogenic cocci could not be found (Weigert's fibrin stain). Within the blood-vessels are many polymorphonuclear leucocytes and thrombi. When the thrombi completely plug the lumen they are often surrounded by circumscribed areas of necrosis at times of considerable extent. These necrotic areas show either the faint outline of the original tumor structure or a

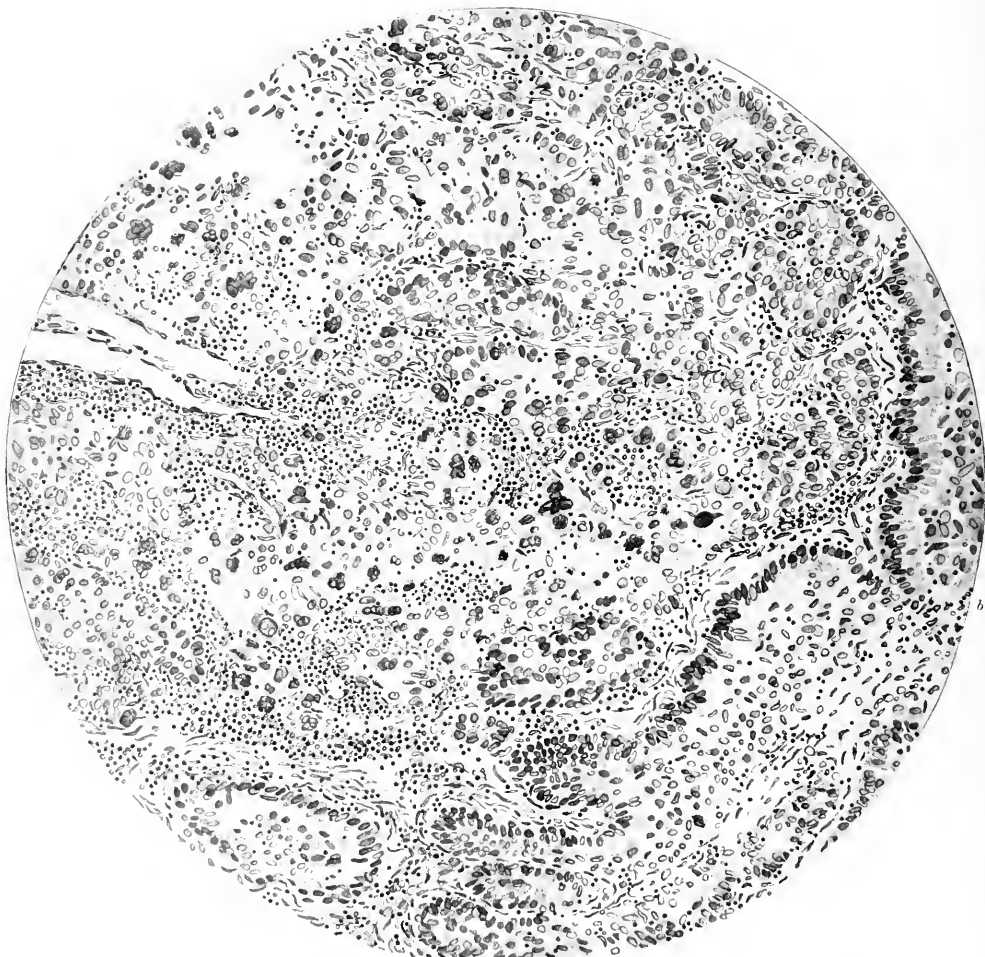


FIG. 5. *a*, Areas resembling simple sarcoma; *b*, margin of large branching alveolus. Hematoxylin and eosin stain. Zeiss objective A X, ocular No. 5.

an alveolus the tubercles often include the tumor cells within their structure. By the use of Gabbet's carbol-fuchsin stain tubercle bacilli were demonstrated.

Infiltrating the tumor in places are also polymorphonuclear leucocytes. These are not numerous in the stroma. They accompany the small round cells in certain areas, and greatly predominate in others. Where they infiltrate the alveoli the alveolar structure is blurred. They are often associated with fibrin and

granular texture with peripheral radiation of epithelioid cells.

That portion of the capsule which under the low power appeared homogeneous and highly refractile is found with greater magnification to be made up of a fine meshwork of fibrils, including small round cells. It resembles embryonic brain tissue where stained with hematoxylin and eosin, but is found to contain fibrin where Weigert's fibrin stain is used. The loose-meshed

reticulum in the centre of the specimen is composed of oedematous fibrous (perhaps mucoid) tissue likewise infiltrated with fibrin and containing isolated tumor cells. The latter show different degrees of atrophy and various kinds of degeneration, for the most part fatty.

The individual tumor cells show many different forms. Where the structure conforms to the type of the simple medullary carcinoma the cells of the alveolus

carcinoma the cells are high cylindrical or low cuboidal. But when the tubules suffer from compression the lumen of the tubules is lost and the lining cells become small and polyedral or flat. The tubular texture therefore passes over into mere lines of cells, which soon break up until all appearance of organoid structure is lost.

The nodule which contains a carcinomalike periphery and sarcomalike centre shows every transition

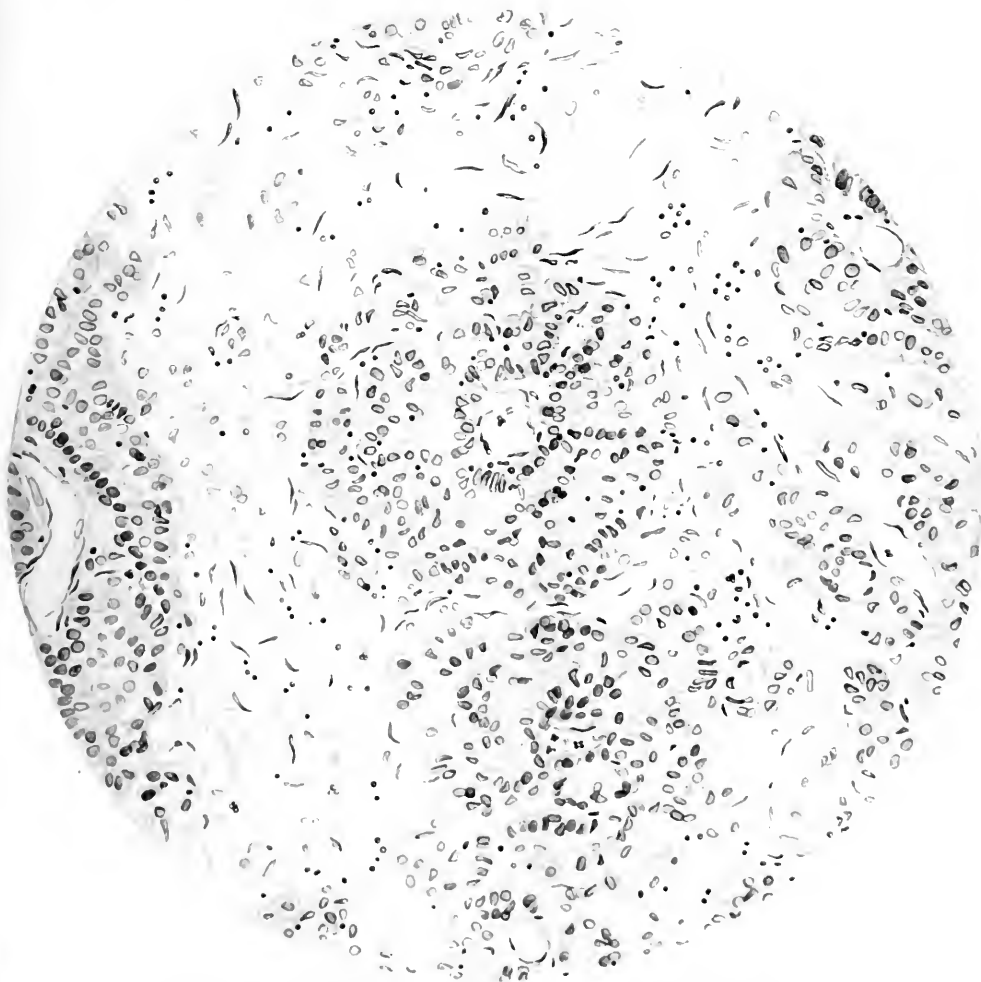


FIG. 1. A carcinomatous nodulus. H. = Hematoxylin and eosin stain. Z = zone of transition.

also conform to the type, being large, most in form of a cylinder, and containing much protoplasm and large round or oval nuclei. When the periphery of the alveolus is polyedral or cuboidal cells the number of rows is reduced within the protoplasm at its base, and the stroma.

Where the structure of the tumor is of the

from the most common type of the tumor, the cells are high cylindrical or low cuboidal. But when the tubules suffer from compression the lumen of the tubules is lost and the lining cells become small and polyedral or flat. The tubular texture therefore passes over into mere lines of cells, which soon break up until all appearance of organoid structure is lost.

The giant cells of the tumor may be of any size and shape, but are usually many times larger than the average tumor cell. They contain one or several large nuclei or many small ones. The small nuclei are usually round and vesicular. The large nuclei are round, oval, or irregular in shape, and usually contain coarse chromatin granules which take a deep hematoxylin stain. Sometimes the nucleus is occupied by one or more hyaline-looking bodies, and the nucleolus itself may have undergone the hyaline change or may be distended with vacuoles or fat. Large budding nuclei and atypical nuclear figures, such as giant mitoses, multipolar mitoses, and forms showing karyorrhexis, are numerous. In the giant cells the nuclei are usually near the centre and are surrounded by a broad zone of granular protoplasm. But sometimes degeneration products distend the cell, push the nucleus to the periphery, and give the signet-ring effect.

The wedge of tumor tissue, made up of large branching alveoli, lies next to the last-mentioned nodule and contrasts sharply with it (Fig. 5, *b*). In the periphery of the alveolus the cells are uniformly high and cylindrical. In the interior they are small and polyedral.

In the centre of the tumor, where the structure resembles perithelial angiosarcoma, the collars of cells surrounding the blood-vessels are made up for the most part of groups of tubules bound together by connective tissue, and lying parallel with the long axis of the vessel or oblique to it. Like the simple tubules described above, the individual tubules of these perivascular collars possess a lining of cylindrical, cuboidal, or polyedral cells. They also lose their tubular character in places and surround the vessels as a diffuse proliferative growth. Sometimes single rows of high cylindrical cells sit upon the vessel walls, with their free ends turned outward and the nuclei located in the basal portion of the cells. Occasionally a double row of such cells is seen, always with the nuclear end toward the vessel wall (Fig. 4, *b*).

The protoplasm of the tumor cells is usually coarsely granular, but various forms of degeneration may cause it to appear hyaline and homogeneous; fatty, pale, and trabeculated; vacuolated, or distended with single large droplets of fat. Besides these, cellular inclusions often exist.

(To be concluded.)

A REMARKABLE CASE OF EPILEPSY IN WHICH FIVE HUNDRED AND NINETEEN SEIZURES OCCURRED IN FORTY-NINE HOURS. NOTES ON TREATMENT, DEATH, PATHOLOGICAL FINDINGS.

By WILLIAM P. SPRATLING, M.D.,
SUPERINTENDENT OF CRAIG COLONY, SONTEA, N. Y.

My object in reporting this case is to call attention to two facts already well known by every physician who is brought much in contact with epilepsy, and who, sooner or later, must be made to feel the weight of such facts too heavily. They are:

1. The remarkable obstinacy with which epileptic seizure manifests them elven in spite of all efforts known to the science and art of medicine to suppress them.
2. The complete failure, either of the naked eye or

of the highest objective of the microscope, to reveal anything in the brain, under post-mortem examination, that might be held accountable as causing the convulsions in a case even in which such convulsions had occurred hundreds of times and with great violence during so brief a period as forty-nine hours.

J. M., woman, aged twenty-two years, was admitted to the colony July 22, 1896. She developed epilepsy in infancy. Her attacks at first were of the *petit-mal* type, but later changed to the *grand-mal* type. On admission to the colony it was noted that her intelligence was of a low order, due to the destructive influence of the seizures operating since infancy. It was also noted when she was admitted that her attacks occurred once a day on an average, but after some months' treatment at the colony they were reduced to one half their former frequency, so that just prior to her death they averaged from fifteen to eighteen a month. She was employed in the laundry and did good work. Notwithstanding the frequency and severity of the seizures, she suffered no appreciable physical impairment, though it was noted that her mental faculties became constantly less acute.

She retired on the night of July 31, 1897, apparently as well as usual. Her regular attending medical officer was absent on vacation, and I was called to see her at one o'clock the following morning. She had just had three seizures, all severe in type.

Having learned by experience the usually fatal significance of *status epilepticus*, and having learned to regard such isolated groups of seizures or serial attacks as frequently being the forerunner of that fatal condition, I at once gave her a special preparation that is usually efficient in checking such manifestations. The preparation is as follows:

R Tinct. opii deod. ℥ v;
Potass. bromid. gr. xxx;
Chloral. hydrat. gr. xx;
Liq. morph. (U.S.) ℥ jss.

To be given as a single dose, and it was so given in this case.

It was effective. She had no further seizures until 6.40 o'clock the same morning, a period of nearly six hours. At that hour they recurred, and by 8.20 o'clock she had had seventeen more. A dose of the above was repeated, and again its action was good, checking the seizures until 4.25 o'clock the same afternoon. At that hour they recurred, when, for the third time, the special preparation was again administered. This time it had no effect whatever, as will be noted by the following record of seizures that occurred between that hour and 6.45 P. M. the same day, a nurse in constant attendance making a note of each seizure, its hour of occurrence, duration, and character: 1.25 P. M., 4.10 P. M., 4.45 P. M., 4.50 P. M., 4.55 P. M., 5 P. M., 5.10 P. M., 5.20 P. M., 5.25 P. M., 5.30 P. M., 5.45 P. M., 5.50 P. M., 5.55 P. M., 6 P. M., 6.05 P. M., 6.15 P. M., 6.20 P. M., 6.25 P. M., 6.30 P. M., 6.35 P. M.

And just here let me digress a moment from describing the further treatment of the case, to give the remarkable features of the fits themselves.

Their order of origin and progression was as absolute and as fixed as were the time periods that marked the intermission, the beginning and ending of each convulsion.

1. The first visible contraction, five hundred and nineteen times in succession, was the bending of the first

joint of the right thumb at right angles to the thumb (Fig. 2). (Fig. 1 shows hand and thumb in normal position.)

2. The second step in the order of progression was the drawing of the bent thumb into the palm of the hand (Fig. 3).



FIG. 1.

FIG. 2.

FIG. 3.

3. The third step in the order of progression was the bending of the four fingers, held still together, at the third joint at right angles to the palm of the hand (Fig. 4).

4. The fourth step in the order of progression was the imbedding of the ends of the four fingers in the palm of the hand over the contracted thumb (Fig. 5).

5. The fifth step in the order of progression was the bending of the now closed fist forward at right angles to the forearm (Fig. 6).

6. The sixth step in the order of progression was the bending of the hand and forearm upward in such a manner as to closely approximate the same to the upper arm.

Then the entire arm was drawn up and out at right angles to the body, the right side of the face contracted, and the head drawn to that side, while the right side of the body and the right leg were next involved.

Now comes an interesting point. As long as the patient was kept under profound chloroform narcosis, which was the case for nine consecutive hours out of the forty-nine the convulsions lasted, during which time she did not miss a seizure, the right side only participated in the convulsion; but when not under the chloroform the contractions, after attacking the right side, as above described, then passed rapidly to and involved the entire left side in a quick general spasm. And let me repeat the fact once more that this particular order of origin and invasion occurred five hundred and nineteen separate and distinct times, not varying in any way whatever; and that the periods between the seizures were markedly uniform, the intervals never less than ten and never longer than fifteen minutes in duration.

In the further treatment of the case the specific preparation was repeated again at 5.20 p. m., but with out effect. The lower bowel was then thoroughly cleaned by liberal douching and the same medicine administered by enema, but without effect. Half a grain of morphine sulphate was then hypodermically administered, but at the end of two hours it had produced no effect so far as could be seen.

At nine o'clock it was decided to resort to chloroform, and she was kept profoundly under its influence for two hours, the only result being that during the condition of narcosis the contractions did not extend to the left side, so at 11 p. m. its use was abandoned.

There was not at any time any cessation of the fits. The patient remained conscious between them until she had passed through about two hundred; and during the brief moments between seizures up to that time she was able to take small quantities of liquid nourishment.

In the meantime all known measures that might have some influence in checking the seizures were tried in succession, but none were effective. She had hot packs and cold packs; she had the most powerful sedatives and motor paralyzants, administered by mouth, by enema, and under the skin; the remedies by inhalation, chloroform and nitrite of amyl; the bandaging under tight compression of the entire right arm, with a rubber bandage, from the finger tips to the shoulder, as recommended by Trousseau in similar cases, and when the contractions begin in a single extremity; in short, all known drugs and forms of treatment that offered the slightest hope of relief were tried and repeated many times, but all to no avail.

Just after the one hundredth seizure she was bled from the left arm, but it did no good. The blood was saved, defibrinated, and sent to Dr. C. A. Herter for examination, but he was absent from home, and it did not reach him in a week, and in the meantime was spoiled.

After the two hundredth seizure it was decided to trephine. The head was shaved, scrubbed with soap and water, and the usual routine antiseptic precautions observed prior to such an operation, but it was not performed. Just as all arrangements were completed her temperature began to rise, and went by rapid strides up to 104°, 105°, 106°, and finally to 106.5° F. She became continuously unconscious, was unable to take any nourishment; the entire body was bathed in profuse perspiration, so much so that it was necessary to change the sheets every two hours. Her face became blue, cyanotic; breathing, labored, stertorous; hands and feet



FIG. 4.

FIG. 5.

FIG. 6.

cold, and the force of the contractions gradually became progressively less severe. As the doctor says that the decline in vitality was evident in this way—that is, in the loss of force of the contractions. Since the time of this case I have met another case very similar, in which originally the number of

two hundred occurred in one day, and I was able to measure the force of the contractions in the hand by placing a dynamometer in the same and gently holding it in place in such a way that all the force of the contraction was exerted on it. There was a difference of eight points between the right and left hands, and it is a singular fact that the power exerted by the morbid contraction of the muscles during a fit was much greater than could be produced by the patient at pleasure, after having fully recovered from the exhausting effects of the severe series of attacks. This is a measurable instance of superhuman force.

Reverting to the case in question, all operative interference was abandoned after this condition of affairs was established. And there is little more in detail to be said, except that once again chloroform was tried, and kept up this time seven hours, thereby, I am confident, prolonging her life to some extent, for immediately upon its withdrawal the attacks increased greatly in violence, and after shorter intervals, and she died after the five hundred and nineteenth seizure, all of which occurred within forty-nine hours.

The brain was removed four hours after death, great care being taken that it suffered no mutilation or the slightest injury of any kind. On inspection nothing abnormal was revealed, not even the blood-vessels of the coverings being engorged to any extent; in fact, the superficial aspect of the entire brain, as to color, was rather pale. Naturally the opposite was expected. The convolutions covering the right hand and thumb centres were especially studied, but with entirely negative results. Without cutting it in any way it was carefully packed and shipped the same day to Dr. Ira Van Gieson, director of the New York State Hospitals Pathological Institute, New York city.

It was injured in transit, a fact always to be regretted, and one that emphasizes the necessity for such an institution as the colony having on the premises the needed facilities for scientific work at such institution and by such institution. The blood drawn after the one hundredth seizure likewise was spoiled through shipment, being delayed so that it did not reach its destination until the eighth day after; and this again illustrates the above point.

Under date of February 4, 1898, Dr. Van Gieson reported on the cases as follows:

"I have gone over the J. M. case, but its preservation is so defective that I can give no report on it. I can find no changes that I dare exclude from artificial ones, which with the Nissl method of study are many and complex, and not as yet generally known. I have cut from the motor zone of the affected side, and can report no changes which in view of the preservation we might justifiably associate with the symptoms. I should have expected at least focal neuralgia (subcortical), mainly in the hand centre. But to show this we have to use some special method, such as Golgi's or the carminate of sodium in the staining, which, of course, alcohol hardening will not observe. So much nowadays depends upon the great variety of methods of hardening and staining,

which all have to be used in the same case, especially epilepsy, that it is the all-important and primary factor in the study of such cases.

"After all, no one has yet discovered the changes due to epilepsy, and we can hardly expect to find it on the spur of the moment to-day. All that have ever been found, after eight years' work at the thing, are evidences of *premature aging of the ganglion cells in the motor cortex*, and this I can not formulate dogmatically."

For his kindness in making this study, and his later interest in scientific matters in connection with the study of epilepsy, and in the building of the colony laboratory, I thank Dr. Van Gieson most heartily.

PRELIMINARY REPORT ON EXAMINATIONS OF THE URINE IN THE INSANE.

WITH A REPORT OF TWO HUNDRED AND TWO CASES.*

By EDWIN G. KLEIN, M.D.,

MEDICAL INTERNE, WILLARD STATE HOSPITAL.

DR. REGIS says: "The most important of the secretions in the insane, as it is in the physiological condition, is that of urine." Much has been written on this subject, and investigators seem to agree upon most points; yet wide differences of opinion exist as to the presence or absence of certain and important abnormal ingredients. Especially is this true of glucose. But before going into some of these it might be well to first consider the subject in a general way.

One of the most difficult things to ascertain in the insane is the amount of urine excreted in any given time. What these difficulties are are so well known that they need no repetition here. But with the assistance of several nurses, afforded me through the kindness of Dr. T. J. Currie and Dr. R. E. Doran, I was able to arrive at the following:

The average quantity passed in twenty-four hours, in one fourth of the above number, by male patients was, approximately, 1,125 c.c., and by females 1,020 c.c. These results at first seemed somewhat low, and the causes assigned were many. However, on referring to some late statistics given by Simon, the above figures are nearer normal than at first supposed. Dr. Simon gives from 1,000 to 1,200 c.c. for males, and from 900 to 1,000 c.c. for females, as being the normal daily amount in the United States; while in Germany and Austria, countries where much beer is drunk, he gives the daily average as being from 1,500 c.c. to 1,700 c.c. The corrected average specific gravity in the same number of cases was 1.019. The lowest was 1.005, occurring in a case of polyuria, and the highest was 1.035, and in which glucose was found. The reaction in the whole number was invariably acid.

* Read before the Willard State Hospital Medical Society, January 11, 1899.

Frequently, however, an apparent alkaline reaction was found, but in only one case—a case of cystitis—was this reaction permanent. An amphoteric reaction was seldom observed. There was nothing remarkable about the odor. Many of the specimens, however, especially those obtained from general paralytics, readily underwent decomposition and soon became foetid. The amount of total solids was, as a rule, under the normal. Urea varied with the specific gravity, as it does in all normal urines, but on the whole it was decreased.

Dr. Johnson Smyth (1) says that the urea is in excess in all cases except dementia. But a number of authorities consulted gainsay this. I might incidentally mention here a point in the diagnosis between a true epileptic paroxysm due to neoplasm and that of hysterical epilepsy, as observed by M. Gilles de la Tourette and M. Cathelineau in Charcot's clinic (2), which is: that in the true variety, due to new growth, there is always a notable increase in the fixed residues of urea and phosphates at the time of the paroxysm, while in the hysterical form there is a perceptible decrease in the same elements at the same time. Occasion was not afforded to observe this, but in the examinations which are at present contemplated, notes will be made.

Phosphates were somewhat decreased in almost all the excited patients, while in most of the depressed patients the reverse was true. From the studies of Mendel and Mairet (3), it appears that the phosphates, especially the earthy ones, are increased in the excited periods of insanity. Lombroso, Dr. McDowall (4), and Dr. Addison (5), whose observations, however, are not so recent, hold to the opposite view.

Oxalates in excess were observed in six of the depressed patients. The subject of phosphaturia and oxaluria is dwelt on at some length by Dr. Clouston in his recent excellent work (5a), and I think it might be well to quote a few of his remarks: "All writers on the urine," he says, "have noticed the hypochondriacal depression of mind, want of energy and originating power, and the irritability that so often go along with the presence of much oxalate of lime and phosphates in the urine.

"Dr. Prout (Prout, p. 176, second edition) thought that the mental state was probably the cause of these abnormal products in the urine.

"Golding Bird (G. Bird, pp. 350-307) says the persons affected with oxaluria are generally remarkably depressed in spirits, hypochondriacal, extremely nervous, painfully susceptible to external impressions, and, in many cases, labor under the impression that they are about to fall victims of consumption.

"The late Dr. Begbie showed that the nervous symptoms are apparently a result of the oxaluria, and disappear under the treatment which cures it.

"There is, on the other hand, no doubt of the fact that oxaluria may be found in a very great number of persons in good health. Lehman, Bence Jones, Gar-

rod, and many others, direct special attention to this fact."

Dr. Clouston concludes by saying: "I think there is scarcely enough evidence to show whether the condition of the urine is a cause or an effect of the brain state. But no matter which, treatment directed to the removal of the same seems to have a beneficial effect in my cases."

On the other hand, Dr. D. G. Stabley (6) reports having treated eleven cases in which oxaluria existed on admission, and only one patient was convalescent at the time of his writing. However this may be, yet the hint given by Dr. Clouston is well worthy of a good deal of attention. In the several cases of oxaluria previously mentioned, treatment was directed to the removal of the same. Two of the patients recovered their mental stability, or at least were able to leave the hospital. I do not wish it to be inferred that the oxalates were the cause of the melancholia or hypochondria, and that their removal brought about the recovery. But I do believe that the special treatment given in these cases, combined with the moral and tonic treatment, very possibly had some influence in hastening the much-hoped-for results.

The observation made by Dr. McDowall, that the chlorides are increased after an epileptic seizure, was noticed in three of the four cases examined. It was also noticed in one case of general paralysis following a convulsive attack.

Uric acid in excess was frequently observed in dementia, and several times in general paralysis. This is but in keeping with what one might expect in these conditions. Urates when in excess were usually associated with a dyspepsia.

Dr. Marro (7) says that he constantly found peptone in the urine of twenty general paralytics. The amount usually was very small—greater in cases following an acute course—and required as much as from eight hundred to a thousand cubic centimetres of urine to give Hofmeister's reaction. Dr. Marro quite concludes that the absence of peptone excludes general paralysis. Kippel (8) says that peptone is very frequently present in the second stage of this disease.

In twelve cases of general paralysis—all in the third stage—which I examined, peptone was present twice. I will state, however, that the tests applied were not very delicate, and that if they had been the findings might have come nearer to those obtained by Dr. Marro.

With regard to albumin, authorities in the main seem to agree. Dr. Barnett (9) says albumin is rarely found in insanity. Dr. Raban (10) agrees with Dr. Richter that albumin is not frequently present, and if it is present, is not connected with the cerebral disease.

Dr. Savage (11), after examining several hundred specimens, says that albumin is not common in acute cases of insanity. Kippel states that small quantities of albumin are often present in the second stage of general paralysis. And Kappan (12) says albuminuria is

especially frequent in insanity where there is chronic Bright's disease, or arteriosclerosis, in acute delirium, epilepsy, and general paralysis. In the two hundred and two specimens examined I found albumin four times, or in about two per cent. of the cases. In one of these it was transient, while in the remaining three it was more or less permanent. None of these patients were general paralytics. In all these cases, however, albumin *per se* was tested for, though it may have been present as globulin, propeptone, etc.

No doubt the previously mentioned writers are correct in saying that albumin is rarely found in insanity, yet in the majority of cases coming to autopsy chronic kidney disease is shown to have existed. But why such a great disproportion should exist between the urinary and autopsy findings does not seem altogether clear. The writer would venture that in most cases albumin in one form or another would eventually be found if sought for often enough.

The question of glucose in the urine of the insane is one in which there seems to be a good deal of confusion. Thus Laillia, who has especially examined the urine of the insane for sugar, arrived at the conclusion that diabetes mellitus occurs more frequently in the insane than in the sane. "An assertion," Dr. McDowall says, "which has not hitherto received any support, and very probably never will, for it is certain that diabetics are very seldom found in asylums."

Dr. Dickinson, of Bethlem Hospital, a few years ago made a large number of observations, and in which he found traces of sugar in a considerable number of the cases. It may have been, as Dr. Savage points out in referring to Dr. Dickinson's report, that the reduction of copper was due to the presence of uric acid rather than to that of sugar. In the present cases there was often a reduction of copper due to the presence of uric acid. It need hardly be mentioned that the presence of albumin, earthy phosphates, etc., frequently leads to confusion in the copper tests. Arrayed against these two worthy observers we find an equal number of careful men who conclude that, broadly speaking, diabetes mellitus is not any more common in the insane than in the sane. In fact, Dr. Savage says, "I know of no direct relationship between diabetes and insanity." Confining ourselves more closely and taking up general paralysis, for instance, we find such remarkable results that it would and, perhaps, does offset the last-quoted opinion. Thus Laillia (12a), Modigan (13), De Wolf (14), and Kiernan (15) have shown and called attention to the relationship of general paralysis and glycosuria. Dr. Allan McLane Hamilton (16) examined the urine of twelve general paralytics at the Poughkeepsie State Hospital and found a varying quantity of sugar in all of them.

Referring to the cases included in this report, it might be stated that, generally speaking, glucose is not very much more frequent in the insane than in the sane. In these cases glucose was present six times, or a little

less than three per cent. Fourteen of the whole number were general paralytics in whom glucose was found twice, or in about fourteen per cent. of the cases.

In all the cases examined three tests for glucose were applied, and in the doubtful ones several in addition. It is not asserted that the tests and methods adopted were infallible, and that glucose never escaped detection, if present, especially in general paralysis, in which it may have existed as shown by the remarkable results obtained by that eminent observer, Dr. Hamilton. Yet, from a clinical standpoint, it seems safe to assert that glucose was not present oftener than has been stated. It was desired to show the curious relation that in true diabetes mellitus the amount of phosphates rises and falls in an inverse ratio to the amount of sugar, but, unfortunately for the object in view, no true case of diabetes mellitus presented itself. But in two cases of diabetes mellitus occurring in sane patients this relationship appeared to exist.

In the beginning it was stated that this report was but preliminary. It is intended to continue the investigations in a series of experiments in which I shall have the pleasure of assisting a member of this staff to determine the influence which certain classes of food have upon the urine and, incidentally, upon the mental as well as the general well-being of certain classes of patients here. We also hope to gather some information, if, as has been recently set forth by Strümpell and others, in those cases of temporary glycosuria in nervous diseases true diabetes is developed eventually, and if the glycosuria is due to nervous disease, or primarily and principally to digestive disorders which are so frequently associated.

Also the hint given by Haig, of St. Bartholomew's Hospital, and others, of the alliance of migraine and epilepsy due to excess of uric acid in the blood, and the errors of diet and digestion which bring about these excesses, as well as several other points already set forth, will be gone into so far as possible. In short, it may eventually be found in these experiments, as Hippocrates said in speaking of epilepsy—that this disease is formed from those things which enter into and go out of the body.

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CHOLECYSTITIS.*

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THE gall bladder is said to act as a reservoir for the bile, but inasmuch as its capacity is very small as compared with the whole amount of the bile secreted, it seems more rational to consider it a part of the excretory duct of the liver so situated that it acts as a safety valve during the active flow of bile into the duodenum. There is only one duct opening into it, so that the bile must come in and go out through the same opening. Physiologists teach us that the liver is constantly secreting bile, but every surgeon who has performed cholecystotomy knows that it is only at certain times after eating that the flow of bile from the fistula is profuse. It is evident, therefore, that the gall bladder does not act as a reservoir to accumulate the bile secreted between meals to be used later, but that it performs its function principally during the time of digestion. Patients with a biliary fistula learn from observation when to prepare for the flow. This all goes to prove that the gall bladder has no function to perform which differs materially from that of the gall ducts, and that it is only a diverticulum from the duct. Its mucous membrane is lined with the same variety of epithelium as the ducts, and it is composed of the same number of layers and tissues. The only difference between the bile in the gall bladder and that in the hepatic ducts is the presence of mucus and a larger percentage of cholesterol in the former. Physiologists are unable to account for the excess of cholesterol in the gall bladder because it contains only mucus-secreting glands. The horse, camel, and a number of other animals have no gall bladder. It has been removed from the human being many times without injury, and its only secretion is mucus; therefore, when it is inflamed, the danger is not from a retained excretion, but from the ravages of the inflammation.

We have another organ in one corner of the abdomen which has even less function than the gall bladder, but which, nevertheless, causes much suffering and many deaths.

While it is certain that the gall bladder is not so frequently the seat of inflammation as the vermiform appendix, I believe that it is more frequently affected than we are aware of. Richardson says that in his experience and that of the Massachusetts General Hospital cholecystitis is of more frequent occurrence than vulv-

lus, intussusception, or other forms of acute intestinal obstruction with which it is likely to be confounded. It is only a few years since we called appendicitis peritonitis, and extra-uterine pregnancy hamatocele. Is it not quite possible that we are calling cases of cholecystitis by some other name or names? The whole number of cases of inflammation in the right hypochondriac region is not so great as in the right inguinal region, but there are many cases of "cramps in the stomach," "colic," "liver complaint," "pleurisy," and "kidney complaint," accompanied by fever, that will be recognized in later years as inflammation of the gall bladder. Every physician and surgeon should become as familiar with Mayo Robson's point as he is with McBurney's point.

It is really remarkable how little literature there is upon cholecystitis. In most of our works on medicine and surgery the word is not found in the index, and in the vast majority of instances in which it is mentioned it is only an incident of cholelithiasis. I have gained the most information from an article in the June number, 1898, of the *American Journal of the Medical Sciences*, by M. H. Richardson, entitled *Acute Inflammation of the Gall Bladder*, and from an article in the July number of the same journal by J. M. Da Costa on *The Significance of Jaundice in Typhoid Fever*.

The cause of cholecystitis is infection, but the how and the why of the infection are not always easy to explain. The *Bacillus coli communis* is most common, but all of the pyogenic germs are found at times. It comes as a complication of typhoid, pneumonia, and all acute infectious diseases. Distention is a very frequent cause of cholecystitis. The gall bladder is then, like the distended urinary bladder, very prone to infection. The distention causes abrasions and circulatory disturbances, which offer a *locus minoris resistentiæ* for the ubiquitous germ.

Gallstones, as compared with their frequency, rarely cause an inflammation, because they are so light and smooth that they rarely cause an abrasion; but when they become impacted, causing distention, they are a frequent cause. It is when impacted in the common duct that they are most likely to cause cholecystitis, because when in the cystic duct they interfere with the entrance of the bile into the gall bladder and can not cause distention from bile. Malignant and other growths may cause cholecystitis by pressure upon the ducts and a distention. This fact will account for many of our excruciations in malignant disease of the upper abdomen, as in Case IV in this paper. The amount of distention surprising in some of these cases. In the case reported the gall bladder was fully enlarged to the size of a grape. It is reasonable to believe that distention is frequently caused by a closure of the ducts from inflammation or swelling of their own walls, but Richardson says that in practically all of his cases there was no inflammation of the ducts, no catarrh, no plugging of the common duct, and no general liver infection. Nature has so well guarded

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the opening between the bowel and the common duct that infection seems rarely to come that way. One of the recognized dangers of cholecystenterostomy, however, is from infection of the gall bladder through the opening, which in this case has no protection. Experiments on animals have demonstrated that ligation of the common duct is more apt to cause than to prevent infection.

It is probable that the most common channel of infection is through the blood. It is natural to expect that the blood in the portal vein, coming as it does from the intestines, would be full of bacteria, and Fütterer's experiments demonstrate that one of the functions of the liver is to excrete those bacteria. He demonstrated that germs introduced into the general or portal circulation are eliminated largely through the liver by way of the bile. Fütterer did not use the colon bacillus in his experiments, but Adami * did, and demonstrated to his satisfaction that the liver cells had a bactericidal action upon the bacillus. Adhesions between the bowels and gall bladder would offer a good channel of infection, but the adhesions found in operations in cholecystitis are usually recent and evidently secondary to the infection of the gall bladder.

The pathology does not differ from that of inflammation of any other organ of like structure. When the bladder is not greatly distended its walls will be somewhat thickened and the mucous membrane congested. The color will vary from a yellowish red to dark green. The serous surface will be congested and roughened, and recent adhesions to the bowels are often found. The contents are usually dark green in color and are composed of mucus, bile, and sometimes pus. When the contents are clear no inflammation is present.

The symptoms, when clearly defined, are those of an acute inflammation situated in the right hypochondriac region. Unfortunately, they are frequently obscure and misleading. When cholecystitis follows the passage of gallstones, or is due to the impaction of a gallstone in the common duct, the symptoms are those of biliary colic, together with those of an acute inflammation. A temperature of 102° or 103° F. is of not infrequent occurrence in an attack of bilious colic, but it is of comparatively short duration, and disappears promptly after the stone is passed. A chill, followed by a rise of temperature, pain, tenderness, and a tumor in the right hypochondriac region, will point to a cholecystitis. Vomiting is a very common symptom. Jaundice sometimes occurs.

The diagnosis in a typical case is comparatively easy, but many cases are atypical, and the diagnosis may be difficult or impossible. Every practitioner should remember that an acute inflammation of the gall bladder is one of the possibilities as a complication of typhoid, pneumonia and all acute infectious diseases. Since physicians and surgeons now realize that this disease

is not of infrequent occurrence, it is evident that we have often overlooked it in the past, for reported cases are comparatively few. Of the six patients whose cases are reported in this paper, one was called peritonitis, one was operated on for appendicitis, and one was treated for some time as typhoid. Three of Richardson's patients were operated on for appendicitis. It is most likely to be mistaken for appendicitis, because it resembles this disease very closely, and because at the present time we are inclined to call every inflammation in the abdomen appendicitis. It may be mistaken for acute obstruction of the bowels, and has, doubtless, many, many times been pronounced peritonitis.

In no case of acute inflammation in the abdominal cavity should we be satisfied with a diagnosis of peritonitis. The causes of inflammation formerly diagnosed as peritonitis are probably, in their order of frequency, appendicitis, salpingitis, cholecystitis, and acute obstruction of the bowels from various causes.

In doubtful cases of abdominal trouble in which it is a question between an obstruction, a tumor, or an inflammation, a blood count may show a leucocytosis, which is quite conclusive evidence of the presence of pus. This holds true in typhoid complications as well, because leucocytosis does not occur in an uncomplicated typhoid.

The diagnosis between this affection and appendicitis is often difficult and sometimes impossible. The gastric disturbance, pulse, and temperature are alike in the two affections. The diagnosis can be made only by distinct localization, but even this may fail, because each of these affections may extend into the territory of the other. When in doubt concerning these two affections, I would advise an exploratory incision in the appendical region, because appendicitis is of more frequent occurrence. Failing to find in the appendix a sufficient cause for the trouble, exploration should be made as far as possible with one or two fingers. Should it then be found necessary to explore the gall-bladder region, I believe that it is better surgery to make a second opening in that region than to extend the original opening, on account of the great danger of a subsequent hernia.

Cholecystitis has frequently been mistaken for obstruction of the bowels. The pulse is of no assistance in this diagnosis. When a decided temperature is present, it points toward cholecystitis, but cholecystitis can not be excluded by the absence of a high temperature, because the temperature in this disease is as unreliable as it is in appendicitis. Ordinarily this diagnosis can be made by careful palpation of the gall-bladder region, but when extreme distention of the bowels with diffuse tenderness is present, it may be impossible to detect a tumor, even when it is of considerable size. Distention of the abdomen points toward obstruction, but may be present with a cholecystitis when complicated by peritonitis. Leucocytosis would indicate suppurative cholecystitis.

When abdominal symptoms arise in typhoid or any infectious disease, the gall-bladder region should be care-

* *British Medical Journal*, October 22, 1898.

fully examined. This examination is especially indicated in typhoid, because a complicating cholecystitis is of not infrequent occurrence, and because the patient's mental condition may be such that he will fail to call attention to this particular locality.

It is at times difficult to distinguish between a cholecystitis and a pyelitis from the local and general symptoms, because they may be practically the same in both diseases. A careful examination of the urine will usually enable us to make the diagnosis. In one instance in my own experience, however, with pus and every other symptom of pyelitis, I found at the operation that the most serious trouble was an inflamed gall bladder full of gallstones, and after the stones were removed and the gall bladder drained the patient made a good recovery.

There are doubtless many mild cases of cholecystitis ending in resolution, as in Case VI in this paper, but they are quite uniformly mistaken for something else. The disease as we understand it now is certainly a grave one. Of fifty-eight cases of cholecystitis complicating typhoid, reported by Da Costa, thirty-nine were fatal. Of these thirty-nine deaths, twenty-two were due to perforation.

The principal dangers are rupture, sepsis, and gangrene. In some very acute cases in which an operation was performed at an early date the gall bladder has been found in a gangrenous condition. Through early diagnosis and prompt treatment a very large percentage of the patients suffering from the graver forms of this disease can be saved.

This is a surgical disease and should always be so considered, but in cases of mild inflammation, with little or no distention, the case should be watched and treated expectantly. I question the wisdom of the popular dose of calomel in these cases, because the ducts and gall bladder are having trouble enough to do the usual amount of work without asking them to do extra work. A mild laxative like castor oil, with rest in bed, is the best treatment, and is all the treatment needed in mild cases. Opiates should be avoided in this disease, as in appendicitis, lest they mask the symptoms.

It is no more necessary to operate in every case of cholecystitis than it is to operate in every case of appendicitis, but when a severe inflammation of the gall bladder exists, or when an inflammation not so severe is accompanied by great distention, an operation affords the only rational treatment. The gall bladder must be opened and drained. The operation is not dangerous *per se*, and when indicated is very much less dangerous than waiting. It is indicated in cases complicating typhoid and other diseases, just the same as in idiopathic cases.

When the gall bladder is found in a gangrenous condition, as sometimes happens, the surgeon's only recourse is to perform a cholecystectomy, and drain.

I have always made my incision along the outer margin of the right rectus muscle, beginning at the tenth rib and extending downward from an inch and a half to

two inches and a half, and have been perfectly satisfied with it. When the disease is complicated with an impacted stone, it will be necessary to extend the opening downward, and if necessary the rectus may be cut across. The distended gall bladder will often appear in the opening as soon as it is made. The contents should be drained off with a trocar, so as to avoid soiling the peritonæum. The bladder should then be drawn into the wound, and after surrounding it with gauze it should be opened. The opening should be large enough to admit an exploring finger. Stones should be removed when present, and the edges of the wound in the bladder fastened to the fasciæ in the upper end of the abdominal wound with numerous stitches of fine black silk. A medium-sized rubber tube should be introduced far enough to reach well down into the bladder, but not infringe upon the bladder walls. A strip of gauze should be wound around the outer end of the tube and a safety pin passed through it to prevent it from slipping into the bladder.

When the peritonæum has not been soiled the wound should be closed. When it has been soiled a gauze drain should be introduced for forty-eight hours. I apply a light gauze dressing, allowing the drainage tube to protrude through it. I then take a piece of rubber dam about a foot square and draw the end of the drainage tube through a small hole in the centre of it and fasten it with a safety pin. An outer dressing can then be applied, which can be changed as often as necessary without disturbing the dressings next to the wound.

In the majority of cases the bile will begin to flow in two or three days. This is usually true when the duct seems to have been obstructed at the time of the operation. At the end of a week the tube and stitches should be removed. The sinus will usually heal in from three to six weeks, but remains open much longer in some cases. The patient is confined to bed from two to six weeks, according to the nature of the case.

I have selected six cases from those coming within my experience to illustrate the subject in a practical way rather than to reflect great credit upon the operator.

CASE I.—In 1880 I was treating a nine-year-old girl for an attack of pneumonia. She seemed to be doing well until about the middle of the second week, when she had a chill followed by a very high fever and very severe pain in the right hypochondriac region. Her suffering was intense, and she rapidly developed a peritonitis, from which she died. At the post-mortem we found a typical pneumonia of the right side, and a large abscess between the liver and the transverse colon, which was due to a ruptured suppurating gall bladder.

In those days we knew nothing of the pneumococcus, but this abscess was doubtless due to invasion of the gall bladder by this germ. At the present day a diagnosis should be made in a case of this kind and an operation performed which would probably save the patient; but in 1880 very little was known of the disease, and I, at that time a young country practitioner, was surely excusable for making my diagnosis at a post-mortem. One of the

most remarkable facts in the history of medicine is that practitioners of high and low degree had been making post-mortems in cases of peritonitis with local findings, such as I describe, for ages before we realized that peritonitis is a secondary lesion.

CASE II.—In the winter of 1893 I was called to see a man twenty-six years old, who four days previously had been suddenly attacked with severe pain in the abdomen, accompanied by vomiting and gradually rising temperature. When I first saw him his abdomen was slightly distended, his temperature was 102° F., and his pulse 100. There was marked tenderness and resistance over the right side of the abdomen. My diagnosis was appendicitis, and I advised that he be taken to St. Barnabas Hospital for an operation. Some time was lost in gaining the consent of the friends to an operation, so that when he arrived at the hospital his pulse was 110 and his general condition bad. I made the usual incision for an appendectomy and found a large abscess and a healthy appendix. The abscess extended up along the outside of the ascending colon. In those days we knew less about appendicitis than we do now, and we still were inclined to adhere to the idea that some of these cases of abscess in the right inguinal region were due to a perityphlitis. I remarked at that time that this was clearly not a case of appendicitis and that it must be a case of perityphlitis, and two days later I made a post-mortem to demonstrate the correctness of my diagnosis, only to find that the abscess was due to a ruptured suppurating gall bladder.

At the present time, owing to better education of the laity as well as of physicians, such a case would be turned over to the surgeon earlier, and the surgeon, finding an abscess located as this one was, and a healthy appendix, would at once think of the gall bladder as a possible origin, and would immediately explore that region and possibly save his patient. He certainly would not have his brain befogged with visions of perityphlitis. These two cases demonstrate Nature's method of confining an abscess to one part of the abdomen. In Case I a pouch was formed under the liver by adhesions between the transverse colon and the abdominal wall. In Case II the ascending colon was adherent to the abdominal wall, confining the pus to its outer side.

CASE III.—July 31, 1898, I was called to see E. L. W., a mail carrier, aged forty-five years, who had been attacked three weeks before with severe pain in the right side just under the liver. Dr. Bernard was called and diagnosed a gall-stone. The patient went to work in three days, but was not well enough to cover his route. On July 29th he had a second attack of pain in the right hypochondriac region which extended up to the shoulder.

He vomited frequently and had chilly sensations. On the 30th his pain was less severe, but he had a temperature of 102° F. On the evening of that day he had a severe chill followed by a temperature of 103° F. There were tenderness and resistance to pressure under the liver. Dr. Bernard made a diagnosis of cholecystitis. On the morning of the 31st I confirmed the doctor's diagnosis and had the patient removed to St. Barnabas Hospital for operation. At this time his pain was in-

tense, and a mass could be felt in the gall-bladder region. I made an incision along the outer side of the right rectus, and as soon as the opening was made in the peritoneum the gall bladder came up through the wound. It was greatly distended and was adherent to the under surface of the liver over quite an extensive area. There were no intestinal adhesions. I passed a finger through the foramen of Winslow and examined the common duct, but could find no stone. An opening was made in the gall bladder allowing about a pint of thick, dark, viscid liquid to escape. The mucous membrane was thickened and looked as if it was covered with granulations. The edges of the opening were stitched to the fascia in the upper end of the abdominal wound, and a rubber drainage tube introduced. No stone was found and none ever came from the wound. It is quite possible that a stone passed at the first attack, which caused abrasions resulting in the inflammation, but it is also possible that all of the symptoms were due to the inflammation.

On August 1st his pulse was normal, temperature 100°, and he was free from pain. After the second day the patient's temperature ran up to 102° F. every afternoon and down to 100° F. in the morning. After the third day there was a free discharge of seemingly healthy bile through the tube, and the patient became quite jaundiced.

August 8th.—Removed the tube and found the wound healthy. Found dullness over a large area of the right side due to pleuritic effusion.

9th.—Removed two quarts of bile-stained fluid from the pleural cavity. No enlargement of the liver; temperature, 102° F.; patient feels well, eats well, sleeps well, and looks well, except for a slight jaundice.

12th.—Temperature normal for the first time. In three weeks from the date of operation the patient went home, feeling well, but with the sinus open.

The pleuritic effusion coming on a few days after the operation was an interesting feature of this case, and I might think that it had come on coincident with the inflammation of the gall bladder, and had been overlooked, were it not that I, Dr. Bernard, and my internes had gone over the whole chest repeatedly. Cultures were being made from the contents of the gall bladder on the day of the operation, but an accident befell them so that I received no report. This patient was unable to begin work as a mail carrier until October, and in November reports that he is making full time, and never felt better in his life. The sinus still discharges some, particularly in the morning when he first gets up.

CASE IV.—In August, 1898, I was called by Dr. J. T. Moore to see H. L., a large, fleshy German, sixty-one years of age, who was suffering from severe jaundice, and who had been in failing health for some time. Our diagnosis was a malignant growth involving or pressing upon gall ducts, causing jaundice. I advised against even an exploratory operation on account of the size and condition of the patient.

About two weeks later I was called again, because the patient had developed some temperature and was suffering intensely. I then suggested that the pain might be due to distention and inflammation of the gall bladder and that an operation might relieve the suffering. The patient expressed himself as being anxious to undertake

anything that would afford him relief from his extreme suffering.

On August 24, 1898, at St. Barnabas Hospital, I made an opening at the usual location and found a greatly distended gall bladder, which I fastened into the abdominal opening and drained. The distention was so great that a uterine sound was not long enough to explore with. We found a carcinoma of the pancreas, to which the patient succumbed in a very few days, but the relief from suffering after the operation was almost complete, and we all felt that our effort on his behalf had not been in vain.

Is it not quite probable that in many cases of malignant growths, so located as to cause obstruction of the common duct, much of the pain is due to the distention and consequent inflammation of the gall bladder, and, if so, is it not good surgery to establish a biliary fistula solely for the relief of pain?

CASE V.—S. O. W., aged thirty-one years, carpenter. On the afternoon of April 10, 1898, while at work he began to feel a dull, aching pain, which would come and go. Had not slept all that night. On April 11th he called a doctor and was given medicine to relieve pain. He had had a similar attack four or five years before, and was told that his present attack was probably appendicitis. On April 12th he suffered pain when he moved, but was comparatively comfortable when quiet. On that day he came from his country home to St. Barnabas Hospital. He then had a pulse of 104 and temperature of 100° F. His abdomen was distended and rigid, and he had pain and tenderness from the liver to the ilium on the right side. He was suffering from a gonorrhea recently contracted. The urine was normal, except for evidences of gonorrhea. He was examined by Dr. Stewart, who did not confirm the diagnosis of appendicitis, and referred him to the medical side. He was given a mild laxative, rest in bed, and an ice-bag over the right side. He remained in about the same condition with a slightly rising temperature until April 16th, when it reached 102.4°. He complained of pain and was constipated. He was given codeine in half-grain doses.

On April 20th, one week after arriving at the hospital, his pulse was 94, temperature 101.8° F. He was suffering some pain and was very restless; his urine was normal in weight and reaction, but contained some sediment in which pus cells were found in large numbers. A blood count showed leucocytosis, about thirty thousand to one cubic millimetre. He was put on a milk diet and one-sixtieth-of-a-grain doses of strychnine. At this time he was comparatively comfortable, but "looked septic."

On April 27th, just seventeen days after the beginning of his attack, he was turned over to the surgical side with a diagnosis of pus in the abdomen, location undetermined, but probably in the liver.

Dr. Stewart, who was on duty at that time, called me in consultation, when I saw him for the first time.

He had a pulse of 88 and a temperature of 100° F., coated tongue, constipated bowels, and had a bad look. His abdomen was slightly distended, and there was an increased area of dullness and tenderness in the liver region; the blood count was twelve thousand leucocytes to one cubic millimetre. A mass could be felt in the right hypochondriac region. Our diagnosis was a probable suppurative cholecystitis with the possibility of an abscess of the liver. We advised immediate operation.

On April 29th I was present when Dr. Stewart operated and found a greatly distended gall bladder full of pus. There were very extensive adhesions in every direction. Drainage was established, and the patient's temperature became normal the next day. He gradually improved, and was discharged on June 2d with an open sinus. No bile ever escaped from the wound and there was no jaundice.

I have reported this case because, while I was only consultant, I found it of much greater interest than a number in which I have operated. The pus was sterile at the time of the operation, but it would be very interesting to know whether or not the infection was from the gonococcus.

The gonorrhœal complication interfered very materially with a correct diagnosis, because it was very difficult to decide that the pus did not come from the right kidney. The diagnosis was so very easy after the abdomen was opened that we were forcibly reminded that an exploratory operation made many days before would have saved the patient much suffering and all the dangers of a perforation.

Some time after leaving the hospital the patient reported that he was in excellent health, but that the sinus was still open. He evidently has an obstruction of the cystic duct, but whether from an impacted stone or from inflammatory deposit, it is impossible to say.

CASE VI.—On November 5, 1898, I was called by Dr. Strout to see Mr. J. B., a man, aged thirty-five years, a carriage-maker, who had been attacked one week previously with severe pain in the gall-bladder region. A diagnosis of bilious colic was made and a hypodermic of morphine was given, which relieved him of most of his pain. He vomited considerably and had some fever from the first.

When I saw him he was comparatively comfortable when quiet, and had a temperature of 101° F. He was slightly jaundiced, just noticeable in the conjunctiva. He had marked tenderness in the gall-bladder region, and while a distinct tumor could not be made out there was decided resistance upon pressure. His urine was quite dark-colored, but otherwise normal. Our diagnosis was cholecystitis, and I advised a dose of sweet oil and rest in bed. His fever and soreness gradually disappeared, so that in ten days from the beginning of his pain he was able to get out of bed. I believe that this was a typical case of mild cholecystitis, a class of cases very commonly overlooked. Whether or not the original pain was due to the passage of a stone I do not know, but owing to the fact that he gave no history of previous attacks, and that his acute pain was so quickly and permanently relieved by a hypodermic injection, I believe that it is quite rational to conclude that it was a mild inflammation due to causes other than gall-stones.

The Via Vitæ.—The *Medical Bull* for March cites the following:

"There are so many perils between the cradle and grave that it is a wonder that a man ever gets from one to the other," said an Irishman.

He wouldn't if it were not for woman.—*Ed. N. Y. M. J.*

THE UNITED STATES ARMY RATION, AND ITS ADAPTABILITY FOR USE IN TROPICAL CLIMATES.

By LOUIS L. SEAMAN, M. D.

HISTORY has shown us that the greatest single influence in the civilization of the world during the last half of the nineteenth century has been the liberal colonial policy of Great Britain. In lands of conflict and chaos she has established peace and prosperity and evidences of enlightenment, as witnessed in India, Burmah, East Africa, and Egypt.

Our own country has taken or is taking its initial step in this same great movement, and the development of the tropics, its peoples, and its soils, the richest and most productive of the globe, has become a subject of the greatest importance to us all.

It is not germane to this paper to discuss this subject save in one light. The initial instrument in establishing law and order in our new and misgoverned lands is the army. Adequate garrisons—in the opinion of those high in authority, fifty thousand men at least—will be required to maintain discipline in these new possessions. The first responsibility of the government should be the proper care of its guardians. Nothing is more costly than disease; nothing more economical than health.

In the Spanish-American war just concluded, the United States soldier who saw service in the Cuban and Porto Rican campaigns passed through several ordeals he should never be called upon to repeat. This paper relates only to one—namely, his experience with tropical diseases without a suitable dietary. The report of the adjutant general of the army, September 30, 1898, gives the number of those who died from wounds during the few brief weeks of actual hostilities as 345; but the hospital records show appalling lists of sickness and death, the mortality from disease alone reaching 2,485, or about eighty per cent. Had these proportions been reversed, the figures would have been nearer those to be expected in an age so advanced in sanitary science and dietetics. For the time from the landing of the army at Siboney and the fight at San Juan Hill to the signing of the protocols, a period of less than seven weeks, was an interval too short for disease other than that of an epidemic or preventable character to develop into serious proportions, especially when the class of men exposed were those selected for the special service. It is true the conditions encountered were somewhat formidable, the season of invasion being the worst that could have possibly been selected, the heat and moisture of the summer months combining to produce that extreme relaxation of the system which was a factor in the production of the many forms of tropical diarrhoea among the troops. But we must look beyond climate for the full responsibility.

From earliest times, history has shown that there has always been a greater mortality from disease among

armies during a war than from wounds, especially in tropical countries; and Spain, keen in her appreciation of this fact, and knowing also that she *had* to fight, courted a summer encounter, convinced that the enemy which would devastate our ranks was disease, rather than the guns of her Morros. In this she was right; but the aid received by the Spanish from the source mentioned was much greater than it would have been had our troops been appropriately fed. Duncan, the highest recognized authority in military hygiene, states in reference to campaigns in the tropics that, "although there is an undoubted distribution of disease, yet it is important to remember that so far from being unable to cope with it, we can act in antagonism to it. Take the class of bowel complaints: by insuring wholesome food, solid and liquid, we can remove all causes of irritation from within; by insuring a rational dress, we can remove all irritation from without. Again, in the matter of conservancy, by insuring the absence of putrefaction from the camp, and the burning or disinfection of the excreta, we cut the ground away from the feet of cholera, enteric fever, yellow fever, and bowel complaints. The army sanitary commission, relative to the rate of invaliding in Madras, distinctly states, in its memorandum of March, 1880, that much of the loss from invaliding from Indian climates is due to the continued action of eating, drinking, and clothing directly opposed to the requirements of the climate." After having considered the factors of temperature and moisture as applied to hot climates, he further says: "There are two remaining great elements—namely, fatigue and insufficient nourishment—to guard against. Indeed, it has been held that climate *per se* is secondary to these; doubtless, as regards temperature and moisture, this is the case, for if a man be properly fed and not overworked—that is, if his mechanical work be proportioned to his individual powers, and his food in accordance with his proportioned work—the factors of temperature and moisture will have but little power on him, except in extreme instances."

For a moment permit me to call your attention to the chart of temperatures as they existed in various parts of our country December, 1898, January and February, 1899.

Range of Temperature in United States Territory.

From published reports of the signal service bureau, the temperature was as follows:

<i>February, 1899.</i> —Alaska ranged as low as — 50°	
<i>January 31, 1899.</i> —White River, Canada,	
(near Fort Brady,	
United States)	— 40°
" " Green Bay	— 26°
" " Kansas City	— 4°
" " New York	+ 16°
" " Key West	+ 60°
<i>December 24, 1898.</i> —Santiago de Cuba . . .	+ 70°
" " Manila	+ 90°
" " Havana (in the sun) +	+ 104°

Extreme variation, 154° F.

Captain C. E. Woodruff, United States army, now stationed with the army in Manila, in an admirable article on Military Food, published in the *Journal of the American Medical Association* in 1892, uses the following simile: "If two ships were to start from New York, each to be absent several years, one in the arctic regions and the other in the tropics, no one would ever dream of provisioning them alike. Yet, if two armies were similarly to start from New York for long periods, one to the extreme North and the other to the hottest parts of the South, the law presumes that both shall carry essentially the same rations. We have not yet reached the point where it is decidedly recognized that the variety in the ration must be great enough to permit of sufficient flexibility to suit extremes of climate."

In a country of such wide ranges of temperatures as the chart indicates, the health of the soldier on active service or in garrison rests primarily upon his being provided with food and clothing suitable to his environment. The government, liberal in all things, freely issues these supplies; but, strange to say, while making certain distinctions in the uniform of the soldier who must endure the rigors of northern winters and the soldier on southern or tropical service, there has never, apparently, been any official consideration given to the diets which climates of such radical differences require. The same ration serves in all sections, and, while it is generous in quantity and usually excellent in quality, it is not such a one as can be universally used in hot and cold climates alike, if due regard is to be paid to the health of the soldier. Rich in nitrogenous, heat-producing elements, it is better adapted for the bodily needs of the soldier stationed in the North; but in extreme southern latitudes and in the tropics it proves an active agent of disease, overheating the system and producing those conditions predisposing to fevers and intestinal and rheumatic diseases, and rendering the labors of the surgeon unavailing. "The enormous number of cases of rheumatism," says Woodruff, "occurring during the Rebellion and since the Rebellion in veterans may not be entirely due to exposure, as popularly supposed. These men were hardened to exposure and should not have had more rheumatism than hunters or trappers or the aboriginal Indians. The limited, often insufficient ration and the absence of fresh articles of diet may have been one of the factors at work." The intimate relationship between diet and disease is a consideration demanding our closest study.

At the beginning of the century the ration of our army, established by an act of Congress, consisted of the following articles: Fresh beef, a pound and a quarter; or salt beef, one pound; or salt pork, three quarters of a pound; bread or flour, eighteen ounces; and for every hundred rations issued, a gallon of whisky, four quarts of vinegar, and two quarts of salt.

In 1808, Dr. Edward Cutbush, of the United States navy, commenting upon it said: "With respect to the

component parts of the ration, I think it defective without an allowance of vegetables or pulse occasionally in garrisons." And again, "The ration of meat should be diminished, and plenty of vegetables issued in lieu thereof."

Whether Dr. Cutbush's article had anything to do with it or not (departmental movements are slow in the army), the ration in 1818 was vastly improved by the addition of dried vegetables. In 1861, at the outbreak of the civil war, it was still further expanded, but in 1864 it went back again to what it had been prior to 1861. In 1890 it experienced another change, fresh vegetables again being added. I am not aware of any great changes made in it during the past eight years. To-day it is composed as follows: Fresh beef or fresh mutton, when the cost does not exceed that of beef, twenty ounces; or pork or bacon, twelve ounces; or salt beef, twenty-two ounces; or, when meat can not be furnished, dried fish, fourteen ounces, or pickled fish or fresh fish, eighteen ounces. Flour or soft bread, eighteen ounces, or hard bread, sixteen ounces; or corn meal, twenty ounces. Baking powder for troops in the field, when necessary for them to bake their own bread, $\frac{1}{8}$ ounce. Beans or peas, 2.4 ounces; or rice or hominy, 1.6 ounce. Potatoes, sixteen ounces; or potatoes, 12.8 ounces, and onions, 3.2 ounces; or potatoes, 11.2 ounces, and canned tomatoes, 4.8 ounces, or 4.8 of other fresh vegetables. Coffee, green, 1.6 ounce, or roasted coffee, $1\frac{3}{8}$ ounce; or tea, $\frac{3}{8}$ ounce. Sugar, 2.4 ounces; or molasses or cane syrup, $\frac{1}{2}$ gill; vinegar, $\frac{3}{8}$ gill; salt, $\frac{1}{2}$ ounce; pepper, black, $\frac{3}{8}$ ounce; soap, $\frac{1}{2}$ ounce; candles, $\frac{5}{8}$ ounce.

This is the ration the soldiers in the Northern States and Alaska were drawing in the winter of 1897-'98, and, without any change in a single constituent, it was the food intended, but not provided, for the American troops in Cuba, Puerto Rico, and the Philippines, where the temperature ranged between 85° and 95° F., and frequently reached much higher figures.

The ingestion of food is to effect two results—the development of body heat and bodily motion or energy. As a general proposition I might state that the latter is stable, and that similar motions will produce similar amounts of heat, the quantity and quality of food necessary to respond to this demand being determined by occupation. On the other hand, the quantity and quality requisite to maintain body heat will vary with exposure and environment. The individual laboring in the open air will require foods of greater heat-producing power that he who is employed within doors; and he who lives in a cold climate must eat more of the starches and fats to produce the body heat necessary for existence than he who lives in the tropics. For with an increase of external temperatures less body heat is required, and the appetite for fat, which was strong in the cold climate, will diminish proportionately. To quote once again from Duncan: "The normal relation of income

and expenditure has been calculated to a certain degree of exactitude. Taking Ranke's well-known standard diet, it is found that it yields about a million units of force or metre kilogrammes. Now, a good day's work equals one hundred and fifty thousand metre kilogrammes. Subtracting this from the total would give 850,000 metre kilogrammes as expended in heat production; or, in other words, a sixth of the total income of food is expended as mechanical force and five sixths as heat."

Dr. Carpenter on this question (the lesser production of body heat where the external temperature is increased) puts it thus: "Every change in the organic components of the body in which their elements enter into new combinations with oxygen must be a source of development of heat; and as a considerable portion of the carbon dioxide and water exhaled in respiration is formed within the body by the metamorphosis of its own tissues, and since the metamorphosis is promoted by the active exercise of the nervo-muscular apparatus, it follows that in animals whose habits are peculiarly active, living in climates in which the surrounding temperature is high enough to prevent any cooling influence, the combusive process thus maintained may be adequate for the maintenance of the temperature of the body at its own normal standard. Hence, here it would appear that we do not want to provide for the heat of the body in the tropics, but only for the work done *where there is a peculiarly active life.*"

Carpenter next says that the general experience of inhabitants of warm climates is in favor of a diet chiefly or entirely vegetable, inasmuch as such a diet affords an adequate supply of the albuminates in combination with the other classes of food, without affording more fuel than the system requires.

These statements have an especial interest when considered in conjunction with the *adaptability* to the tropics of our own army ration. The life of the soldier was sufficiently active to "maintain the temperature of the body at its own normal standard," the surrounding temperature in the West Indies having been "high enough to prevent any cooling influence"; and without the assistance of a "highly animalized diet," such as our ration was and is to-day. My own experience, and that of others, agreed with the "general experience of inhabitants of warm climates." We had little craving for meat, our appetites, on the contrary, inclining us toward vegetables and fruits. Left to natural selection, the appetite will always incline to the food supplied by Nature in the particular climate of the individual's environment; and any unusual craving for food primarily belonging to another zone is unnatural and due to an artificial appetite.

The food products of each zone will be found in every case to be those that are peculiarly adapted to the particular needs and requirements of the zone's inhabitants, and where the climate creates a demand for an

excessive animal diet, Nature furnishes it, or *vice versa*. A glance over the earth's surface will show this. In the arctic regions there is a great dearth of edible vegetation, but animals and fish abound, whose flesh, fats, and oils furnish the rich heat-producing foods required by the people who live in those lands of almost perpetual snow and ice. In the tropics these conditions are reversed. There is a scarcity of animal food, but an abundance of vegetation that yields nourishment with low heat-producing qualities. Between these extremes, in the temperate zone, we find a mixture of both and each in plenty. And here it might be well to pause and review the procession of the seasons of the temperate zone, observing the effect each has upon the food desire, and the means Nature has taken to meet it. As the spring days lengthen and become warmer, the early garden vegetables make their appearance; summer with its increased heat brings a profusion of vegetables and fruit, the supply of which gradually decreases as autumn approaches; and winter finds us with few fruits and vegetables that can be kept through its icy months, but with butcher shops well stocked with savory meats. With these changes our appetites are in perfect sympathy. The early spring vegetables are eaten with a keen relish, our tables in the summer months bear more vegetables and fruits, and in the winter the large roasts and steaks again have the place of honor, and small side dishes are sufficient for all the vegetables our appetites crave. Dr. Koerfer proclaims in the *Deutsche medizinische Wochenschrift* of last July that if Europeans would leave their pork fat, their meats, and their alcohol at home with their furs and heating stoves when they go to reside in the tropics, they would avoid all disturbances that are erroneously ascribed to the climate, but which are, in fact, only due to the failure to conform to Nature's laws. He considers that Nature makes the food conform to the climatic conditions—from the fish-oil polar zone through to the pork-fat temperate zone to the olive-oil and vegetable tropic zone. He writes from an experience of several years in the tropics, and adds that he felt better subjectively when actively employed than when lounging, no matter how high the temperature.

I am aware that many of the inhabitants of the temperate zone make but little change in their dietary as the seasons vary; but how many cases of dyspepsia, indigestion, and other ills do we not treat yearly, and how many more ailments and diseases, particularly in middle age or advanced life, could be traced to this very cause if we but carried our investigations back to the root of the disorder!

Let me invite your attention for the moment to the ration of the British soldier in India for the purpose of contrasting it with our own. It consists of the following articles: Meat, with bone, sixteen ounces; bread, sixteen ounces; potatoes, sixteen ounces; rice, four ounces; sugar, 2.5 ounces; tea, 0.71 ounce; salt, 0.66 ounce.

You will observe that the meat component is less by from four to six ounces than that of the United States ration, although Tommy Atkins is one of the meat eaters of the world. The bread allowance is less by two ounces, but the rice is greater by 2.4 ounces.

The potential energy of the American ration as compared with the ration of the British soldier is more than a fourth greater, when expressed in caloric units—the American being 3,800, the British 2,800; while the caloric units in the ration of an English prize fighter, as given by Gillespie, of Edinburgh, is but 2,200. In both the English and American army ration the proportions of proteids and carbohydrates are equal, the excess in heat equivalent in the United States ration being in its larger proportion of fats.

Stewart Clark, inspector-general of prisons, N. W. Provinces, India, in his *Practical Observations on the Hygiene of the Army in India*, says that "even this ration of the British army is, perhaps, more faulty in being too liberal than in any other respect; for it is now well known that the quantity of food in a tropical climate is much more frequently to blame than the quality in causing impaired health, such as disorders of the liver, dysentery, diarrhoea, and other complaints attributed to the climate." After stating that the most abstemious are the healthiest men in India, he further says that no change contributed more to the health of the European resident than the discontinuance of heavy midday luncheons, and the reduction of meat in the bill of fare of the better classes to one meal a day. He adds that "the greatest defect in the diet of the European soldier is the want of a due amount of vegetables. If the want of a plentiful supply of this most essential article of diet is the cause of disease in other groups of individuals, why should it not be equally so among soldiers? In fact, they are often so badly supplied with vegetables that there can be no doubt that dysentery, diarrhoea, and other complaints, which often assume a scorbutic character, may in a great measure be attributed to this cause."

Even Dr. Benjamin Rush, physician-general to the Military Hospital of the United States, in his *Direction for Preserving the Health of Soldiers*, published in 1808, says: "The diet of soldiers should consist chiefly of vegetables. The nature of their duty as well as their former habits of life require it. If every tree on the continent of America produced Jesuit's bark, it would not be sufficient to preserve or to restore the health of soldiers who eat one or two pounds of flesh in a day."

These few citations which I have made, and I have made them because they especially bear out my own observations in the tropics, for no originality is claimed in this paper, will sufficiently indicate that the results of a too excessive meat diet in tropical climates furnish no new field for investigation. Why, among civilized people, meat should have continued to form a major part of the soldier's ration after its serious effects

have been pointed out by the best medical authorities for nearly a century is past comprehension.

(To be concluded.)

Therapeutical Notes.

For Nephritis.—The *Revue médicale* for December 14, 1898, quoting the *Journal de médecine de Paris*, attributes the following prescription to Neumann:

R Nitroglycerin 15 grains;
Rectified alcohol 150 "
Distilled water 600 "

M.

Eight drops to be taken in three divided doses in the day. If the medicament is well borne, the daily amount may be raised to twelve drops.

Benzoate of Mercury.—At a recent meeting of the French Therapeutical Society M. Desesquelle and M. Bretonneau (*Gazette hebdomadaire de médecine et de chirurgie*, February 16th) showed that, contrary to the received opinion, benzoate of mercury is not soluble in aqueous solutions of alkaline iodides and chlorides. Such so-called solutions of benzoate of mercury, they said, contained in reality benzoate of sodium and chloride or iodide of mercury. On the other hand, benzoate of mercury, they asserted, was readily soluble in an aqueous solution of neutral benzoate of ammonium, and, moreover, the benzoate of mercury in such a solution, thanks to the benzoate of ammonium, did not precipitate the albuminoids of the blood serum even after the addition of chloride of sodium to the solution of the mercurial salt. The authors found by experiments on rabbits that weight for weight of the combined mercury, benzoate of mercury was slightly less toxic than sublimate; but in any case the absence of albuminoid precipitation rendered it preferable for therapeutic use to the latter salt. For hypodermic injections they recommended the following formula:

R Benzoate of mercury 60 centigrammes;
Neutral benzoate of ammonium 8 grammes;
Distilled water, enough to make 60 cubic centimetres.

M.

In the following formula cocaine is associated with the benzoate.

R Benzoate of mercury .. 60 centigrammes;
Neutral benzoate of ammonium 3 grammes;
Cocaine 12 centigrammes;
Benzoic acid 60 "
Distilled water, enough to make 60 cubic centimetres.

M.

A Gargle for Lacunar Amygdalitis. The *Journal de médecine de Paris* for February 26th credits the following formula to Mouré:

R Borax, each, 5 parts;
Potassium bromide, 1 part;
Carbolic acid 50 parts;
Glycerin 150 "

M

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THE MEDICAL PROFESSION AND THE PRESIDENCY
OF THE NEW YORK BOARD OF HEALTH.

MANY of our readers are doubtless aware that, as at present constituted by law, the board of health of the city of New York consists of the president of the police board, the health officer of the port, and three health commissioners appointed by the mayor, two of whom must have been practising physicians for not less than ten years preceding their respective appointments. And there is this singular provision in the law: "The health commissioner who is not a physician shall be president of the board and shall be so designated in his appointment." For years the medical profession has been humiliated by this unjust and senseless discrimination. Now it is proposed, in assembly bill No. 1129, introduced by Mr. Bulkley, to so amend the statute, which is a part of the city charter, as to make the passage quoted read: "The health commissioner who shall be president of the board shall be so designated in his appointment," leaving the mayor free to appoint a physician president of the board if he deems it advisable to do so.

There was never any semblance of a good reason for hampering the mayor and stigmatizing medical men in the way the present law does those things. Nevertheless, although the anomaly has repeatedly been protested against, its correction has heretofore failed of accomplishment. There seems now, however, to be a good prospect of Mr. Bulkley's amendment being carried in the legislature. If it is carried, much credit will be due the committee on legislation of the Medical Society of the State of New York, and particularly its energetic chairman, Dr. Frank Van Fleet. Elsewhere in this issue we publish Dr. Van Fleet's letter calling upon physicians to press their demand for the abolition of the odious discrimination made against them in the present law. Every one of his arguments is sound, and we trust that those of our readers who live in the State of New York will urge the matter upon their senators and assemblymen. We can not afford to leave a stone unturned to deliver ourselves from our present disfranchisement.

THE DIAGNOSTIC SIGNIFICANCE OF THE
CANON-PFEIFFER BACILLUS.

If we admit that this organism is the cause of influenza, the practical value of its recognition in cases of disease seems likely to prove greatest in instances in which the influenza complicates other affections or is itself marked by unusual features. In a preliminary report by Dr. F. E. Wynekoop, first assistant bacteriologist of the Chicago department of health, recently issued by the department, we find it stated that in several instances the bacillus of diphtheria and that of influenza have been found at the same time in the throat, and the symptoms have usually accorded with this fact. The influenza bacillus, says Dr. Wynekoop, has been found present also in cases of scarlet fever, measles, and pneumonia, and in all these instances it has been noticed that there were clinical manifestations that were difficult to interpret until the microscopical examination was made.

Dr. Wynekoop goes on to say that in the diagnosis of cases suspected to be those of diphtheria some interesting observations have lately been made relative to obscure symptoms of that disease. In cases that appeared to be diphtheritic at the onset the presence of the Canon-Pfeiffer bacillus has been demonstrated, and the subsequent course of the disease has confirmed the microscopical diagnosis of influenza. In many of these cases, says Dr. Wynekoop, the throat symptoms were so marked—redness and swelling of the tonsils and a well-developed membrane—that a physician would not hesitate to pronounce the case one of diphtheria, yet influenza bacilli were found in a condition almost pure. Cases with little throat disturbance, but with a rise of temperature, bodily aching, and general depression, on the other hand, were found to be examples of mild diphtheria, in spite of the symptoms pointing to influenza. The influenza bacillus, too, was the sole micro-organism found in certain cases that appeared to be instances of amygdalitis or of severe laryngitis. Very few of the general symptoms of influenza were observed in these cases, and the diagnosis was made solely on the strength of the bacteriological examination, but was confirmed by the subsequent course of the disease.

Dr. Wynekoop remarks that it has occasionally been observed that when there is influenza in a household some member of the family is suddenly attacked with acute inflammation of the conjunctiva characterized by severe pain, swelling, redness, and a profuse discharge of pus of medium consistence and cheesy appearance. As the picture differs materially from that of ordinary acute inflammation of the conjunctiva, it has been sus-

pected that the bacillus of influenza might have something to do with the diseased condition, and that organism has been found in abundance in the discharge.

We are informed from the office of the Chicago department of health that since the January report was published the Canon-Pfeiffer bacillus has been found in the bronchial mucus of a number of patients presenting the characteristic symptoms of mumps. These symptoms, however, have not usually lasted more than three or four days, and then the swelling and soreness have subsided and the temperature has fallen to normal, but, coincidentally with the subsidence of the symptoms of mumps, there has occurred in some cases a sharp intestinal disturbance, with peritonitis and dysentery in two instances. All these cases have occurred in adults, and thus far none of them have proved fatal.

THE PRODUCTION OF SEX AT WILL.

FRIEDMANN (*Klinisch-therapeutische Wochenschrift*, 1898, No. 30, p. 1156; *Gazette hebdomadaire de médecine et de chirurgie*, January 8th), as a result of investigation into this problem, says that in order to resolve it these three questions must be answered: 1. Is it possible by artificially modifying the material exchanges to deflect from its primitive direction the normal course of the physiological functions of the organism? 2. Can any explanation be given of the fact that in certain families only boys, and in others only girls, are produced? 3. What are the most appropriate means to influence the material exchanges in the reproductive system of the animal organism so as to produce at will a given sex?

The first question has been amply answered in the affirmative by Darwinism. As to the second, he says that women with a tendency to the exclusive production of one or other sex present signs of a degeneration so marked as to constitute a pathological condition, a sort of androgenous or gynæcogenous cachexia.

Haeckel has shown that the phenomena of heredity must be attributed to physical and chemical causes, and that the sexual characters must preexist in the original germ before the definition of the genital apparatus. The androgenous and gynæcogenous cachexia must be meant to imply that the female element in the first, or the male element in the second, is destroyed by its opposite in some organic chemical process. Consequently, to answer the third question, it is necessary to seek for either the male or the female element deposited in the ovule a sort of toxalbumin, so that one of the two elements may predominate over the other. Empirically he finds in ovarine the substance to combat the female, and in spermine that to overcome the male element. By submitting a

female guinea-pig to the administration of tablets of ovarine from October 26, 1897, to February 15, 1898, he succeeded in obtaining the gestation of a single male normally developed. Another female similarly submitted to subcutaneous injections of spermine became pregnant with a single female. The uniparous pregnancy, he says, seems to indicate a lowered reproductive power.

There is a popular belief that excess of sexual ardor in the woman produces boys, while where the excess exists on the man's side, girls are commonly the offspring. The great preponderance of girls among first children and of boys among "love children" is regarded by some as partly confirmatory of this view. In the light of Friedmann's researches, it would seem possible that the relative degree of sexual ardor or vigor in the parents is at least a contributory factor in sex production.

MINOR PARAGRAPHS.

THE NEED OF LOGICAL DISCRIMINATION ON THE PART OF READERS.

JUDGING from correspondence which occasionally comes to hand, it seems desirable to remind readers at large that not everything which appears in the columns of a medical journal is necessarily indorsed by that journal. All editorial expressions, of course, represent the views of the journal; while original contributions are accepted mainly for one of two reasons—viz., either because they present something apparently new and worthy of consideration and investigation, or because, in the case of matters of opinion, the weight of the author's reputation justifies a respectful consideration of his views, whether upon examination the individual reader feels able to yield his assent thereto or not. These same reasons apply also in the selection of articles for reproduction from other journals. Science knows no such thing as "authority," as the expression is used by the schoolmen. Every member of the medical profession is supposed to be competent to form a judgment for himself on the reasonableness of matters set forth by others, though he may not himself have heretofore known of them. This is the object of his previous training, general and technical, and with him in the last resort must rest the responsibility of accepting unreservedly or reservedly, or of rejecting, the views or teachings which are merely brought by the editor as impartially as possible, and acting on the before-mentioned principles, to his notice.

ACIDITY OF THE MOUTH DURING SLEEP.

THE dentists tell us that an acid condition of the fluids of the mouth plays an important part in the etiology of dental caries, also that the causes of that affection are particularly active during the hours of sleep, when the saliva stagnates, so to speak, instead of being subjected to the agitation and renewal incident to the chewing and other movements that to some extent are almost continuous except during sleep. However carefully we may cleanse the teeth and rinse them with

antiseptic solutions on going to bed, therefore, we are guarding but temporarily against decay; it gains on us while we are asleep. Possibly those who suffer with insomnia may snatch a crumb of comfort from this reflection, but we fear there is in it no consolation for the mouth-breathers, for the desiccation of the mouth which takes place in them during sleep, while enough to give rise to considerable discomfort on their waking, is quite insufficient to hamper pathogenic bacteria in their work of destruction.

GRAVE SYPHILIS IN PHYSICIANS.

VON BRANDIS (*Deutsche medicinische Wochenschrift*, 1898, No. 21; *Monatshefte für praktische Dermatologie*, February 15, 1899) has met with a number of grave cases of syphilis among medical men. The initial lesion was on the finger, and the diagnosis was always a late one, and this fact probably serves to explain the gravity of the course pursued by the disease.

A USE FOR EXHAUSTED DRUGS.

In the March number of the *American Journal of Pharmacy* the editor of that journal, remarking upon the immunity of certain of the domestic animals against particular poisons, suggests that medicinal roots, rhizomes, fruits, and seeds, being rich in nutritive material, may economically be turned to account as food for animals, instead of being thrown away as of no value, after their medicinal constituents have been extracted.

GIGANTISM AND FEMININITY.

At a recent meeting of the Paris Society of Biology (*Gazette hebdomadaire de médecine et de chirurgie*, February 16th) M. Hallopeau showed a male giant who had no beard, whose mammary glands were considerably developed, and whose genitals were extremely small. On the lower part of the abdomen there were enormous varices, and M. Hallopeau suggested that these might have so pressed upon the vasa deferentia or the nerves of the testicles as to have caused their atrophy and consequently the femininity.

AMERICAN FLUID EXTRACTS.

In the *Province médicale* for February 25th Dr. F. Martz, of the medical clinic of the Lyons Faculty of Medicine, explains the processes by which the American fluid extracts are made, and recommends them for more extensive use in France as being quite as efficacious as the plants from which they are prepared.

RUPTURE OF THE VAGINA DURING LABOR.

In the *Journal* for November 5th we mentioned several instances of this accident. In the *Monatsschrift für Geburtshilfe und Gynäkologie*, viii, 3 (*Centralblatt für Gynäkologie*, March 4th), Dr. Van der Hoeven, of Amsterdam, relates another case in which the rupture was observed after version with difficulty in the extraction of the after-coming head. The whole circumference of the fornix was involved, except the anterior portion adjacent to the bladder. The edges of the laceration did not bleed, and a tampon was all that the author thought it necessary to employ. Recovery took place in eight weeks.

THE CITY BOARD OF HEALTH AND THE MEDICAL BOARD OF THE PRESBYTERIAN HOSPITAL.

In our present issue we publish some resolutions recently adopted by the medical board of the Presbyterian Hospital regarding the city board of health as it might be affected, in the hospital board's opinion, by the enactment of assembly bill No. 451. We should be sorry to see the board of health's usefulness crippled, but we do not believe in rewarding its achievements by giving it a virtual monopoly of any commercial product, be it antitoxine or anything else. Government, municipal, State, or national, must not enter upon the field of trade competition.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending March 11, 1899:

DISEASES.	Week ending Mar. 4.		Week ending Mar. 11.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	14	3	17	6
Scarlet fever.....	181	13	182	14
Cerebro-spinal meningitis.....	0	9	0	12
Measles.....	..	..	280	15
Diphtheria.....	167	27	..	..
Croup.....	9	5	11	5
Tuberculosis.....	244	172	178	202
Small-pox.....	7	1	0	0
Chicken-pox.....	49	0	37	0

Sulphur Fumes in Grippe.—Dr. J. Ashburton Cutter (*Georgia Journal of Medicine and Surgery*, February) says: An aged lady in England, when the epidemic was so severe some years ago, wrote to a medical gentleman in America, asking for relief from her grippe. She was advised to burn some sulphur, and a subsequent letter of gratitude testified to the first relief she had got. The author's mother, sick occasionally with grippe, would not take sulphur, as she asserted that it stung her nose. About fifteen months ago, while suffering from an attack, the diagnosis having been made with a microscope, it was decided that she should inhale burning sulphur, which she did, with a speedy cure of her "cold." Children sick with grippe will stand the strong fumes of burning sulphur, and laugh at their well elders, who have to go out of the room. Much more clinical evidence might be cited.

Tuberculous Perforation of the Velum Palati.—At the *Société médicale des hôpitaux*, M. Barbier (*Progrès médical*, January 28th) recently described a case of tuberculous perforation of the velum palati with tuberculosis of the tonsil and consequent glandular affections. Syphilis, it was asserted, had no part in the affection, and antisypilitic treatment only aggravated the malady, which was ameliorated by applications of ten-per-cent. lactic-acid solution and by overfeeding.

Rupture of the Diaphragm.—Dr. Mathew Porter, of Cincinnati (*Fort Wayne Medical Journal-Magazine*, February), reports a case of rupture of the diaphragm resulting from a fall down a flight of stairs. The patient was able to get to bed unaided, and considered herself not much hurt at the time, but she lived only two or three days. The earlier symptoms could not

be learned, owing to the fact that the patient was unable to give an account of herself when brought to the hospital, and had had no physician prior to that time. At the autopsy the diaphragm was found ruptured at the œsophageal opening to the extent of an inch and a half. All of the stomach, except the pyloric end, the transverse colon, and mesentery had escaped into the left side of the chest, pushing the heart to the right, and flattening the lung against the chest wall. The mesentery and colon were gangrenous. There were no symptoms of peritonitis. There was dullness on percussion from the sternum to the left axillary line from the third to the seventh rib, and over this area was to be heard on auscultation a sound resembling that which is made by shaking fluid in a partially filled cavity.

A Probable Result of Anticigarette Legislation.—The *British Medical Journal* for February 18th says:

"The supreme court of Tennessee has decided that the cigarette is not a legitimate article of commerce. This decision was given in an action brought to test the law passed some time ago by the State legislature prohibiting the sale of cigarettes. The supreme court has ruled that the law in question is constitutional, and must be enforced. The ingenious youth of Tennessee will now have a double pleasure when they snatch the fearful joy of a cigarette: they will be doing what is declared by their sanitary oracles to be hurtful to health, and what is declared by the highest legal authority to be unlawful."

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending March 11, 1899:

Small-pox—United States.

Mobile, Ala.,	Feb. 25	1 case.
Los Angeles, Cal.,	Feb. 17-25	15 cases, 5 deaths.
Washington, D. C.,	Feb. 18-25	10 "
Washington, D. C.,	Mar. 1-4	5 "
Savannah, Ga.,	Mar. 2	1 new case.

Origin probably in North Carolina.

Jacksonville, Fla.,	Feb. 28-Mar. 4	3 cases.
Higgesville, Ill.,	Mar. 7	1 case.
Chiro, Ill.,	Mar. 7	26 cases.
Dana, Ill.,	Mar. 7	1 case.
Murphysboro, Ill.,	Mar. 7	2 cases.
Evansville, Ind.,	Mar. 3	1 case.
New Albany, Ind.,	Mar. 5	1 "

Indian Territory.—The secretary of the territorial board of health of Oklahoma states, March 1st, that nearly fifty deaths have been reported to him from Indian Territory.

Lewistown, Me.,	Feb. 25-Mar. 4	2 cases.
Watervliet Township, Mich.,	Mar. 2	1 case.
Onondah, N. Y.,	Feb. 18-25	3 cases.
New York, N. Y.,	Feb. 25-Mar. 4	7 "

Burlington, Franklin County, N. C.,	Mar. 1	3 "
Brooklyn, Ohio,	Feb. 7-27	1 case.
Dialton, Ohio,	Feb. 7-27	1 "
Franklin, Ohio,	Feb. 7-27	2 cases.
Gallipolis, Ohio,	Feb. 26	2 "
Sandusky, Ohio,	Feb. 7-27	2 "
Shenandoah, Ohio,	Feb. 7-27	1 case.
South Charleston, Ohio,	Feb. 7-27	1 "
Sinsburg, Ohio,	Feb. 7-27	5 cases.
Toledo, Ohio,	Feb. 7-27	1 case.
Wellington, Ohio,	Feb. 7-27	1 "
Willoughby, Ohio,	Feb. 7-27	1 "
Harry County, S. C.,	Mar. 9	Small-pox outbreak reported.

Memphis, Tenn.,	Mar. 1-7	13 cases.
Alexandria, Va.,	Mar. 6-9	5 "
Norfolk, Va.,	Mar. 1-7	20 "
Norfolk, Va.,	Mar. 8	2 "

Small-pox—on Vessels.

S. S. <i>City of Kansas</i> , at Memphis, Tenn.,	Mar. 7	1 case.
S. S. <i>Thomas Brooks</i> , at Santiago de Cuba from Guantanamo Bay,	Feb. 3	Small-pox reported.

Small-pox—Foreign.

Rio de Janeiro, Brazil,	Jan. 13-20	12 cases, 5 deaths.
Bahia, Brazil,	Feb. 4-11	2 "
Tientsin, China,	Jan. 4-11	1 case.
Moscow, Russia,	Feb. 4-11	6 cases, 3 "
Odessa, Russia,	Feb. 11-18	1 case, 1 death.
St. Petersburg, Russia,	Feb. 4-11	3 cases, 1 "
St. Petersburg, Russia,	Feb. 4-18	4 "
Vladivostok, Siberia,	Nov. 1-30	1 case.
In other parts of the same maritime district		21 deaths.
Constantinople, Turkey,	Feb. 10-20	10 "
Smyrna, Turkey,	Feb. 3-12	1 death.

Yellow Fever.

Rio de Janeiro, Brazil,	Jan. 13-20	32 cases, 13 deaths.
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Cholera.

Calcutta, India,	Jan. 21-28	16 deaths.
Madras, India,	Jan. 28-Feb. 3	4 "

Plague.

Bombay, India,	Jan. 24-31	540 deaths.
Calcutta, India,	Officially reported—probably	1,100 "
	Jan. 21-28	1 death.

The Boston Medical Society.—At the last regular meeting the following officers were elected for the ensuing year: President, Dr. Gustavus Liebman; vice-presidents, Dr. R. K. Noyes and Dr. J. S. Lockart; secretary, Dr. W. A. Butman; financial secretary, Dr. P. Sosnoski; and treasurer, Dr. I. Shapiro. Directors, Dr. L. Frumson, Dr. M. N. Goodman, Dr. V. Byehower, Dr. M. Gerstein, Dr. A. Rovinsky, Dr. C. Parker, and Dr. J. S. Lockart. The following resolution was unanimously adopted: *Resolved*, That the Boston Medical Society is opposed to and protests against the passage of the so-called Osteopathic Bill now before the Massachusetts Legislature.

The Medical and Surgical Society of the District of Columbia.—At the last meeting, on Friday evening, the 10th inst., the following papers were presented for discussion: Puerperal Sepsis; its Prophylaxis and Treatment, by Dr. Moran; and Antitoxine in the Treatment of Diphtheria, by Dr. Edwin L. Morgan.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Medicine, on Tuesday evening, the 11th inst., the following papers were presented for discussion: The Differentiation of Renal Discharges, by Dr. Thomas B. Carpenter; Acute Bright's Disease, by Dr. J. Henry Dowd; Chronic Bright's Disease, by Dr. Albert H. Wochner; and Primary Nephritis (Infantile), by Dr. George A. Hummelbach.

Resolutions on the Bill concerning the City Board of Health.—On March 13th the medical board of the Presbyterian Hospital passed the following resolutions: *Whereas*, The medical board of the Presbyterian Hospital believe that the health department of New York has, within the past few years, contributed most valuable services to the city in the prevention of the spread of infectious diseases, as well as by contributions to scientific medical research; and

Whereas, There is pending before the assembly a bill called assembly bill No. 454, which would embarrass and curtail this work of the health department, designed

to protect the health of the citizens of New York; therefore be it

Resolved, That this board do hereby earnestly protest against the passage of assembly bill No. 451, believing that such action would materially injure the interests of this community.

Resolved, That these resolutions be spread upon the minutes of this board and that copies be sent to the legislature, to the New York health department, and to the medical journals of this city.

[Signed.] W. P. NORTHRUP, M. D.,

Secretary of the Medical Board.

The Richmond Academy of Medicine and Surgery.—

At the last regular meeting, on Tuesday evening, the 14th inst., the subjects for discussion were Infantile Paralysis, by Dr. Charles A. Labenberg, and The Necessity of Medical Inspection in Schools, by Dr. Hodges.

The Medical Society of City Hospital Alumni, of St. Louis.—At the last meeting, on Thursday evening, the 16th inst., the decision of the committee on award in the prize competition for the two best essays on The Medical Inspection of School Children and the Hygiene of Schools was made known, and the names of the successful competitors announced.

The Late Dr. J. E. H. Nichols.—At the last regular meeting of the New York Otological Society, held January 24th, the following resolutions were adopted:

The New York Otological Society has learned with sorrow of the death of Dr. J. E. H. Nichols, which occurred in North Carolina on September 12, 1898. Dr. Nichols was a charter member, a constant attendant at the meetings of the society, and a most valued contributor to its scientific work.

Resolved, That in the death of Dr. Nichols the society has lost one of its most respected and valued members, and otology a faithful and scientific worker;

That the sympathy of the society be extended to his family in their sad loss; and, finally,

That these resolutions be spread on the minutes of the society and published in the *Medical Record* and in the *New York Medical Journal*.

Resolved, That a copy be sent to his family.

[Signed.]

J. B. EMERSON,

ALBERT H. BUCK,

GORHAM BACON.

} *Committee.*

Death of Professor Rutherford, M. D., F. R. S.—By the death of Dr. Rutherford, professor of physiology in the University of Edinburgh, which took place on February 21st from influenza, medical science loses a distinguished ornament and the University of Edinburgh a brilliant teacher and a man of light and leading. His name has been too long before the scientific world for his loss not to deeply affect university institutions of all countries. Professor Rutherford was sixty years of age.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 4 to March 11, 1899:*

BORTH, JOHN T., Acting Assistant Surgeon, is relieved from further duty at the General Hospital, Fort Myer, Virginia, and will proceed to Cincinnati.

DARNALL, CARL R., First Lieutenant and Assistant Surgeon, will proceed to Havana and report to the commanding general, Division of Cuba, for duty.

HARNETT, EUGENE H., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board at Fort Monroe, Virginia.

LAMB, D. H., Acting Assistant Surgeon, is relieved from further duty at the General Hospital, Fort Myer, Virginia, and will proceed to Owasso, Michigan.

LYNCH, CHARLES, Captain and Assistant Surgeon, is relieved from further duty at Fort Point, Galveston, and will report to the commanding officer, Sixth Infantry, for duty, to accompany that regiment to Manila.

MACLEAN, DONALD, Jr., Acting Assistant Surgeon, will proceed to Savannah and report to APPEL, DANIEL M., Major and Surgeon, for duty at that place.

MILLHOFF, CLARENCE B., First Lieutenant and Assistant Surgeon, is relieved from further duty at Washington Barracks, D. C., and will proceed to Savannah and report to the commanding officer, United States General Hospital, for duty.

ROBERTS, GEORGE W., Acting Assistant Surgeon, will proceed to Fort Porter, New York, and report to the commanding officer, Thirteenth Infantry, for duty, to accompany that regiment to Manila.

WAKEMAN, WILLIAM J., Major and Brigade Surgeon, will proceed to Philadelphia and assume the duties of attending surgeon and examiner of recruits in that city.

WHITTINGTON, WILLIAM L., Acting Assistant Surgeon, will report to the commanding officer, Sixth Infantry, for duty, to accompany that regiment to Manila.

The honorable discharges of the following medical officers for the volunteer army are revoked:

HARRIS, HENRY S. T., Major and Brigade Surgeon, who will proceed to Fort Crook, Nebraska, and report to the commanding officer, Sixteenth Infantry, for duty, to accompany that regiment to Manila.

KENDALL, WILLIAM P., Major and Brigade Surgeon, who will proceed to Plattsburgh Barracks, New York, and report to the commanding officer, Twenty-first Infantry, for duty, to accompany that regiment to Manila.

RAYMOND, HENRY I., Major and Brigade Surgeon, who will proceed to Fort Porter, New York, and report to the commanding officer, Thirteenth Infantry, for duty, to accompany that regiment to Manila.

Changes of Address.—Dr. Edward B. Coburn, to 313 West Fifty-seventh Street; Dr. F. T. Labadie, to No. 11 West Thirty-ninth Street; Dr. Thomas J. Leahy, from Cambridgeport, Massachusetts, to No. 303 Broadway, New York; Dr. James P. Tuttle, to No. 42 West Fiftieth Street.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending March 11, 1899:*

ANGENY, G. L., Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the *Lancaster*.

ARNOLD, W. F., Passed Assistant Surgeon. When discharged from further treatment at the hospital, Norfolk, Virginia, he is ordered home and granted sick leave for three months.

GUTHRIE, J. A., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and ordered to the *Franklin* immediately.

PAYNE, J. H., Jr., Assistant Surgeon. Detached from the *Franklin* and ordered to the Naval Hospital, Chelsea, Massachusetts.

ROSS, JOHN W., United States navy, retired, is assigned to Military Hospital No. 1, Havana, Cuba, and will report to the commanding officer of that hospital for duty.

Promotions.

CROWNSHIELD, A. S.; VAN REYPEN, W. K.; BRADFORD, R. B.; STEWART, E.; MELVILLE, G. W.; HICHBORN, P.; ENDICOTT, M. T.; O'NEIL, C., chiefs of bureau in the Navy Department to be rear admirals from March 3d.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending March 9, 1899:*

WHITE, J. H., Surgeon. To proceed to Elizabeth, N. J., for special temporary duty. February 24, 1899. To report at Washington, D. C., for special temporary duty. February 28, 1899.

CARRINGTON, P. M., Surgeon. To proceed to Baltimore, as inspector of unseviceable property. March 2, 1899.

PETTUS, W. J., Passed Assistant Surgeon. To proceed to Cape Charles City on special temporary duty. February 25, 1899. To proceed to Burlington, N. C., for special temporary duty. February 28, 1899.

COBB, J. O., Passed Assistant Surgeon. To report at Washington, D. C., for special temporary duty. February 25, 1899.

GUITÉRAS, G. M., Passed Assistant Surgeon. To proceed to Matanzas, Cuba, for duty as quarantine officer. February 25, 1899.

MCADAM, W. R., Assistant Surgeon. To proceed to Key West, Fla., and assume temporary charge of service. February 25, 1899.

BROWN, F. L., Hospital Steward. To proceed to Norfolk, Va., and report to commanding officer for duty. February 25, 1899.

HOLSENDOFF, B. E., Hospital Steward. Granted leave of absence for two days. February 24, 1899. Upon being relieved by Hospital Steward F. L. BROWN, to proceed to San Juan, Puerto Rico, and report to Surgeon A. H. GLENNAN for duty. February 25, 1899.

COBB, J. O., Passed Assistant Surgeon. To proceed to Savannah, Ga., for special temporary duty. March 2, 1899.

FICKES, L. D., Assistant Surgeon. To report at Washington, D. C., for special temporary duty. March 1, 1899. To proceed to the Reedy Island Quarantine Station and report to the medical officer in command for temporary duty. March 8, 1899.

RAMUS, CARL, Acting Assistant Surgeon. To proceed to the Cape Charles Quarantine Station and report to the medical officer in command for duty and assignment to quarters. March 6, 1899.

BROOK, C. H., Hospital Steward. To proceed to New Orleans, La., and report to the medical officer in command for duty and assignment to quarters. March 9, 1899.

BROWN, F. L., Hospital Steward. To proceed to the Cape Charles Quarantine Station and report to the medical officer in command for duty and assignment to quarters. March 6, 1899.

SLOUGH, CHARLES, Hospital Steward. To proceed to the San Francisco Quarantine Station and report to the medical officer in command for duty and assignment to quarters. March 9, 1899.

TROXLER, R. F., Hospital Steward. To proceed to San Francisco, Cal., and report to the medical officer in command for duty and assignment to quarters. March 9, 1899.

Board Convened.

Board convened to meet at the United States Marine Hospital, San Francisco, Cal., at 10 o'clock A. M., May 2, 1899, for the examination of candidates for appointment as assistant surgeon in the service. Detail for the board: GASSAWAY, J. M., Surgeon, chairman; BROOKS, S. D., Surgeon; GARDNER, C. H., Passed Assistant Surgeon, recorder.

Appointments.

T. FARRAR RICHARDSON, of Louisiana; W. W. KING, of Michigan; FRANK J. THORNBURY, of New York; and CARL RAMUS, of Illinois, commissioned as assistant surgeons. March 9, 1899.

WALLACE R. HUNTER, of Pennsylvania, to be acting assistant surgeon for duty at the port of Erie, Pa. March 9, 1899.

ROBERT F. TROXLER, of Kentucky, to be junior hospital steward. March 4, 1899.

Society Meetings for the Coming Week:

MONDAY, March 20th: New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, March 21st: New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, March 22d: New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, March 23d: New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, March 24th: New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, March 25th: New York Medical and Surgical Society (private).

Births, Marriages, and Deaths.

Married.

GILMAN—BALDWIN. In New Haven, on Saturday, March 4th, Dr. Warren Knudsen Gilman, of Worcester, Massachusetts, and Miss Helen Harriet Baldwin.

HOYT—ACKERMAN.—In New York, on Tuesday, March 14th, Dr. Ezra P. Hoyt and Miss Maria L. Ackerman.

JOHNSON — HUNTINGTON.—In New York, on Wednesday, March 5th, Dr. Edward West Johnson and Miss Fannie Huntington.

Died.

ALLEN.—In Canarsie, N. Y., on Wednesday, March 8th, Dr. Amos Allen, of Grafton, N. Y.

BARWIS.—In New York, on Thursday, March 9th, Dr. Frank T. Barwis.

BENSON.—In Chicago, on Thursday, March 9th, Dr. John A. Benson.

BUTTS.—In Vicksburg, Mississippi, on Saturday, March 11th, Dr. John Butts, in the seventy-second year of his age.

DUNLAP.—In Indianapolis, on Tuesday, March 14th, Dr. John McDougall Dunlap, aged seventy years.

HEARD.—In Galveston, Texas, on Wednesday, March 5th, Dr. Thomas J. Heard, in the eighty-fifth year of his age.

HEATH.—In New York, on Friday, March 10th, Dr. Asahel Hawley Heath, in the seventy-sixth year of his age.

LITTLEFIELD.—In Jamestown, N. Y., on Saturday, March 11th, Dr. Joseph D. Littlefield.

OLLIPHANT.—In Mobile, on Friday, March 3d, Dr. Samuel R. Olliphant, aged seventy-one years.

PRAY.—In Brooklyn, on Thursday, March 9th, Mary B. Pray, mother of Dr. Susan R. Pray.

QUINCY.—In Boston, on Saturday, March 11th, Dr. Henry Parker Quincy.

SHATTUCK.—In Pawtucket, Rhode Island, on Saturday, March 11th, Dr. William H. Shattuck, formerly of Boston, aged seventy-seven years.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS

By ARTHUR N. TAYLOR, LL. B.

X.

RIGHTS AND LIABILITIES OF THIRD PARTIES.*

(Continued from page 347.)

Liability of Master for Attendance on Servant.—It is a well-settled doctrine that the master is not by reason of his relation to the servant liable for medical attendance upon such servant.† If, however, a physician is called by a master to attend a servant in his employ, such engagement has been held to amount to a direct undertaking by the master to pay; but if he is called by the master's wife, even with an express agreement that her husband will pay, the husband is not bound unless it can be shown that the agreement is made with his knowledge and consent, or that he subsequently ratified the hiring. The reason for this rule may be readily

perceived; the husband is never bound by the contracts of his wife except for necessities furnished to her or to her children; therefore a contract imposing a liability upon him for medical attendance upon a servant, which he is not primarily liable to pay, is beyond the scope of her authority.*

Liability of Vessels for Attendance upon Seamen.—

For the information of those physicians living in cities and towns located on the oceans, great lakes, or other navigable waters of the United States, the general rule of liability of vessels for the care and medical attendance upon their sick and disabled seamen is given.

It is a well-established rule of law that shipowners and masters are bound to provide suitable care and medical treatment for seamen who become disabled by sickness or injuries received in the discharge of their duties, and a physician attending such seamen may hold the vessel, the master, or the owners to pay for his services.‡

The extent of the period covered by this liability is the subject of much conflict; some cases hold that the seaman is entitled to care and medical treatment until he recovers, while others restrict the right to the period covered by the voyage for which the seaman is engaged. It seems that where the injury or sickness is the result of culpable negligence or mistreatment by the master or officers of the vessel the courts have held the liability to extend over the entire period of sickness or disability; whereas, when the sickness or injury could not be imputed to such cause, they have considered the liability as terminating when the voyage for which the seaman was engaged was completed and he was discharged.‡

This is a question upon which the law books present a great amount of material—some of it conflicting—but, owing to the comparatively small number of the profession who are interested in its discussion, it is not thought advisable to use the space necessary for an examination of particular instances of the application of the general principles laid down.

Statute of Frauds.—The question of when a third party not in the relation of husband, parent, or master is liable for the services of the physician is often a very nice one. Section four of the English Statute of Frauds provides, among other things, that "no action shall be brought whereby . . . to charge the defendant upon any special promise to answer for the debt, default, or miscarriage of another person . . . unless the agreement upon which such action shall be brought, or some memorandum or note thereof, shall be in writing and signed by the party to be charged therewith."

This section of the statute has been re-enacted, with certain unimportant modifications, throughout the United States.*

At first glance it would seem that in order to enforce the liability of a third person of the class we are now considering, his contract of obligation must in all cases be reduced to writing and signed. This statute is, however, not so broad in its application as it at first appears. As a matter of fact, the contract or agreement fixing the liability of the third party is more frequently without than within the operation of this statute.

* In Mr. Taylor's ninth article, published in the *Journal* for March 11th, page 347, first column, twelfth line, for "a nurse, friend, or acquaintance," read a mere friend or acquaintance; in the footnotes, for "Crane vs. Boudouine," read Crane vs. Boudouine, and for "Enlack vs. Turner," Gulack vs. Turner.

† 4 Waite's Actions and Defences, 100.

* Baker vs. Witten, 39 Pac. Rep., 491 (Ok.).

† Holt vs. Cummings, 102 Pa. St., 212; 48 Am. Rep., 199.

‡ The Ben Flint, 1 Abb. F. S., 126; the J. Fleurd, 43 Fed. Rep., 92; contra the Lizzie Frank, 31 Fed. Rep., 477.

* In Pennsylvania it does not apply to any contract the consideration of which is less than twenty dollars.

In order to bring a case within the statute, a third person who is in no way liable for the debt or default in question must promise to pay it if not paid by the debtor. If the promise is of such a nature as to act as an assignment or sale of the security for the debt, or of the debt itself to the third party, it does not come within the statute, nor if the third party assumes to be the paymaster, making himself directly and unconditionally responsible for the debt, is it necessary to reduce such agreement to writing.

It will be observed that the promise to pay must, to come within the statute, be conditional: thus, if a third party says to a physician, "If the patient does not pay you I will," the promise comes within the statute, and to be binding must be reduced to writing. But if the third party says, "Attend such a patient and I will pay you," the promise does not come within the statute, and the oral promise is binding,* for in such a case the third party does not agree to answer for the debt of another, but by his contract makes the debt his own.

It is a well-established rule of law that all valid contracts must be based upon some good or valuable consideration. If, therefore, a third party says to a physician, after the services are rendered and the indebtedness is incurred, "I will pay the bill of —," such a promise is not binding, whether written or verbal, because there is no consideration upon which to found the contract. A sufficient consideration need not be one of money. When, for example, the promise is made before services are rendered, the consideration for assuming the obligation is that the physician will render such services; or, if the services have been rendered, and a third party agrees to assume the indebtedness, provided the physician will forbear from bringing a suit upon the account, or will dismiss a suit already brought, such condition will be a sufficient consideration upon which to found the contract of liability. A physician who was attending a patient was approached by the patient's son with the following statement: "You do what you can for father, and you charge this bill to me, and what you do afterward, and I will leave you some money before I leave town." This was a direct undertaking, and therefore not required to be in writing; but, so far as it related to the fee for services already rendered, was without consideration and void, although good and binding for services rendered after the date of the promise.†

But if a physician who is attending a patient refuses to continue his services unless guaranteed that he will be paid for both past and future services, and a third party undertakes to make such payment upon condition that the physician's services shall be continued, the continuation of the services will be a sufficient consideration upon which to base the obligation.

It is hoped that the foregoing explanation has clearly shown the difference between an original undertaking, which is valid and binding whether in writing or not, and a collateral obligation for the payment of another's debt, which must be in writing to comply with the statute. An examination will therefore be made of a few cases which tend to show what circumstances will amount to a direct and original undertaking by a third party.

(To be continued.)

* Buchanan vs. Sterling, 63 Ga. 227; Boston vs. Farr, 1 Ca. 415 R., 504; 23 Ad. R., 901; Thomas vs. Souney, 62 Ill. App. 31.

† Chappell vs. Barkley, 51 N. W., 351 (Mich.), 90 Mich., 35.

Letters to the Editor.

THE PRESIDENCY OF THE NEW YORK BOARD OF HEALTH.

NEW YORK, March 9, 1899.

To the Editor of the New York Medical Journal:

SIR: I inclose you herewith copy of a bill introduced in the legislature by Assemblyman Bulkley, known as assembly bill No. 1129, the enactment of which into law would remove the restriction placed on a physician being president of the health board of this city.

Why this unjust, if not unconstitutional, restriction should have been placed on the citizens who have chosen medicine as their calling nobody seems to know, nor has any one been found who could advance any good reason why the prohibition should not be repealed.

There are certainly many medical men in the city who have demonstrated that in executive ability they are not inferior to men in other walks of life. Whether these men would accept the presidency of the health board, if it were offered them, is not the question to be considered in this connection, but that they should be picked out and pointed at as incompetent to fill the position for which their education and training particularly qualify them is little short of outrageous. If a law were enacted which said that citizens who were not lawyers should be judges of our courts, or that a citizen who was not a member of a certain religious denomination should be mayor of the city of New York, thereby positively proscribing certain individuals because of their professional or religious affiliations, indignation meetings would quickly accomplish the repeal of these obnoxious laws. Why, then, should the medical men tolerate a law which places on them a penalty of this kind, simply because they are members of an otherwise honored profession?

There can be no doubt of the success of the bill repealing this unjust clause in the charter of greater New York, if the medical profession will demand it. If a sufficient number of medical men will write to their representatives in the legislature, asking that this bill receive favorable consideration, their desires will be gratified. The bill does not make it mandatory on the mayor to appoint a physician, but simply gives to medical men the right to enjoy one of the privileges the constitution gives to all citizens who are not imbeciles or convicts.

FRANK VAN FLEET, M. D.

Chairman of the Committee on Legislation of the Medical Society of the State of New York.

HOW QUININE MAY FAVOR POST PARTUM HÆMORRHAGE.

CHARLOTTESVILLE, VA., March 1, 1899.

To the Editor of the New York Medical Journal:

SIR: Dr. Barton C. Hirst, in his article in the *American Text-book of Obstetrics*, mentions that quinine given as an oxytocic increases the liability to post-partum hemorrhage, but offers no explanation as to why it should have this effect. It is well known that the presence of white blood corpuscles is essential to the formation of a blood clot. Possibly this liability to post-partum hemorrhage after the administration of quinine is due to the fact that quinine interferes with the activity of the white blood corpuscles, and, if given in sufficient quantities, may do so to such an extent that the coagulation of the blood in the uterine vessels after labor is imperfect.

H. D. FERNISS, M. D.

Book Notices.

Traumatic Separation of the Epiphyses. By JOHN POLAND, F. R. C. S., with Three Hundred and Thirty-seven Illustrations and Skiagrams. London: Smith, Elder, and Company, New York: G. P. Putnam's Sons, 1898. Pp. xxxi-926. [Price, \$18.]

It would seem on first thought that a book of over nine hundred pages on the single subject of separation of the epiphyses must necessarily contain a great deal of superfluous matter. But we believe the standpoint of the author to be a just one, that this condition has hitherto been imperfectly dealt with in the standard works on surgery and orthopedics, and that one is justified in laying stress on the development of bone, pathological anatomy, etc., in an exhaustive book of this kind. Several pages even are devoted to experiments on lower animals and on the dead subject to bring about this condition. The reader will find elaborate statistics relating to its frequency as regards age, sex, etc. The total number of cases collected of the long bones is six hundred and ninety-three. The order of frequency is as follows: 1. The lower epiphysis of the femur. 2. The lower epiphysis of the radius. 3. The upper epiphysis of the humerus. 4. The lower epiphysis of the humerus. 5. The lower epiphysis of the tibia. 6. The upper epiphysis of the tibia. The question whether separation of the epiphysis can occur during intra-uterine life receives only a passing notice, the author apparently not having seen the condition. It is a subject, however, of importance from a medico-legal standpoint, since not infrequently is this condition present in the newly born, and it is important to determine whether it occurred during the labor or was present before.

Foucher divides separation of the epiphysis into three classes: 1. Pure separation of the epiphysis from the diaphysis without any osseous tissue adhering to it. 2. Separation of the epiphysis with a thin, finely granular layer of osseous material attached to it. 3. Solution of continuity of the diaphysis in the midst of the osseous spongy tissue near the epiphysis. In instances in which this occurs ossification is fairly well advanced, the epiphysis being almost joined to the diaphysis. It must be admitted, though, as the author suggests, that true separation or a clean separation between the osseous tissue and the epiphyseal cartilage is extremely rare. To the average reader many of the lesions described will appear but as curiosities. The Röntgen pictures are numerous, and show extremely well what they are intended to represent.

Die Einschränkung des Bauchschnitts durch die vaginale Laparotomie (Kolpoceliotomie anterior). Von Professor Dr. A. DÜHRSEN, in Berlin. Mit 7 Abbildungen und 6 Tabellen. Berlin: S. Karger, 1899. Pp. 266.

SINCE the theoretical suggestion by Sänger of the availability of the anterior transverse incision of the vagina in the reposition and suturing of a retroverted uterus and the practical carrying out of the method by Dührsen, the latter operator has had a vast experience, the results of which are given in the monograph under consideration. The actual motive seems to be not so

much the detailing of statistics as to remove the just stigma which the operation has received because of the great danger from pregnancy ensuing after its performance. A number of cases have been reported in which, after fixation of the uterus by this method, it has been necessary to do a laparotomy and remove the child by the abdomen, with fatal results in some cases. This is caused, in the author's opinion, by the formation of firm fibrous adhesions between the anterior surface of the uterus and the posterior surface of the bladder. The adhesions so formed are not distensible during the enlargement of the gravid uterus and lead to difficulties during delivery, all of which can be avoided by proper suture of the peritoneum, so that the adhesions which are to hold the uterus in place may be solely between the two peritoneal surfaces. Such adhesions are easily stretched during the enlargement of the uterus in pregnancy. Complete tables of the author's five hundred and three cases of anterior colpoceliotomy are furnished, together with a special one detailing the results of pregnancies after such an operation. The figures seem to sustain the thesis very well, but final judgment must be deferred until there are more cases at our disposal.

Affections chirurgicales du tronc—statistique et observations. Par le Dr. POLAILLON, Chirurgien de l'Hôtel-Dieu, Professeur agrégé à la Faculté de médecine de Paris, etc. Paris: Octave Doyn, 1898. Pp. vi-843.

THIS volume contains the reports of the cases of surgical diseases of the chest and abdomen, including those of the male genito-urinary tract, which were observed by the author during a period of nearly twenty years. The peculiar value of the publication lies in the fact that all cases of any interest have been fully recorded, while the less valuable ones are included in the statistics, and also in the fact that the results extend over a period beginning with the use of the spray and antiseptics of Lister and ending with the present era of asepsis. There is a moderate number of illustrations, chiefly diagrammatic, but all showing the essential points of the conditions to be recorded. Such a work is a valuable storehouse of surgical knowledge and should be a stimulus to inspire similar full and careful reports in this country.

Chirurgie de l'utérus. Par HENRI DELAGÈNIÈRE, Ancien interne en chirurgie des hôpitaux de Paris, etc. Avec 378 figures dans le texte. Paris: Institut de bibliographie scientifique, 1898. Pp. xii-467.

THIS is a most useful compilation of the multitudinous operations which at one time or another have been invented and carried out upon the uterus. The procedures are arranged in chronological order in each section, and an excellent index renders the finding of the description of any desired operation but the matter of a few moments.

BOOKS, ETC., RECEIVED.

Examination of Water. (Chemical and Bacteriological.) By William P. Mason, Professor of Chemistry, Reusselair Polytechnic Institute, etc. First Edition. First Thousand. New York: John Wiley & Sons, 1899. Pp. 135.

The Ready Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M. D. (Col.), Pro-

fessor of Dermatology in the Woman's Medical College of the New York Infirmary and in the Medical Department of the University of Vermont, etc. With Seventy-five Illustrations. Third Edition, revised and enlarged. Lea Brothers, 1899. New York and Philadelphia: Pp. viii-17 to 647. [Price, \$2.50.]

Les rayons de Röntgen et le diagnostic de la tuberculose. Par A. Bécère, Médecin de l'Hôpital Sainte-Anthoine. Avec 9 figures dans le texte. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 95.

De la diminution de l'activité nerveuse dans le psoriasis, le cancer et la lèpre. Disparition de ce syndrome sous l'influence du traitement par les injections organiques. Avec 20 gravures dans le texte et 2 tableaux donnant les rapports d'échanges nutritifs ou urologiques et les schémas urographiques fournis par l'analyse. Communication à l'Académie de médecine par le Docteur Bouffe, Membre de la Société de médecine et de chirurgie pratiques de Paris, etc. Paris: A. Maloine, 1899.

Proceedings of the Academy of Natural Sciences of Philadelphia, 1898. Part III, September to December.

The Diseases and Primary Tumors of the Thyroid Gland. By H. D. Rolleston, M. D., of London.

Pelvis Suppuration: Procedure and Plan of Attack. By Byron B. Davis, M. D., of Omaha, Nebraska. [Reprinted from the *American Medical Association*.]

Dystocia due to "Accidental Hemorrhage," with Clinical Notes of Four Cases. By Stanley P. Warren, M. D., of Portland, Maine. [Reprinted from the *American Journal of Obstetrics*.]

Malignant Disease of the Kidney. By Byron B. Davis, M. D. [Reprinted from the *Western Medical Review*.]

The Chemistry of Cod-liver Oil. By Eustace H. Kane, Ph. C. [Reprinted from the *American Druggist and Pharmaceutical Record*.]

Holocene in Ophthalmic Surgery; its Superiority over Cocaine; its Therapeutic Value. By Hasket Derby, M. D., of Boston. [Reprinted from the *Archives of Ophthalmology*.]

The Use of Gloves in Surgery, with a Report of an Investigation as to the Efficacy of Cotton Gloves. By W. R. Lockett, Student in the Jefferson Medical College, Philadelphia. [Reprinted from the *Philadelphia Medical Journal*.]

Notes on the Absorption versus the Digestion of Milk. By L. Duncan Bulkley, M. D. [Reprinted from the *Journal of the American Medical Association*.]

Personal Experience with Bottini's Operation in the Radical Treatment of Hypertrophy of the Prostate. By Willy Meyer, M. D. [Reprinted from the *Medical Record*.]

New Inventions, etc

A NEW SURGICAL TABLE.

By JONAS S. FORD, M.D., H.B.

TRACTION TABLE.

This illustration needs no explanation, and will give some definite idea of a surgical table as planned and constructed, in view of interesting geometrical and practical and new lines of thought. I hardly say that the invention, as it now appears, is not a hundred at all perfect, and I

were I to reconstruct the present table, I would make many alterations. Some attachments I believe to be superfluous and without advantage, but, in the main, I am satisfied, and will now endeavor to acquaint the

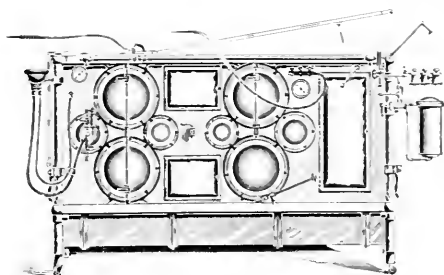


FIG. 1a.

profession with the device and the ideas which led to its construction. To aid us, the reader will be frequently required to consult the illustrations, but as a prelude I may with advantage outline the fundamental ideas from which the table was developed. 1. Experience taught me that heat, generously applied to the body of a patient undergoing a severe surgical operation, sustained the forces and acted as a great preventive of shock. 2. Ether, being evaporated by heat and supplied with oxygen, is less unpleasant to inhale, the anaesthesia being more rapid, and vomiting, under ordinary care, seldom witnessed. All this is of advantage in preserving the tranquility of the nervous system, thereby diminishing the liability to shock, and substituting pleasant for, as a rule, extremely unpleasant experiences. 3. The need of an adjustable flexible sawing, milling, and drilling cable arranged for horizontal and circular movements will be appreciated in all those operations upon bone where high speed and a powerful cutting tool are a requisite. 4. A capacious aspirating outfit, always in readiness and accessible, is desirable. 5. The discharge of hot, cold, and tepid distilled water, and the choice of two or more antiseptic solutions through a single common conduit by a simple opening and closing of valves—the same to be by a separate branch tube joined to the aspirating tube—is believed to be of the greatest advantage. 6. A forced respiratory apparatus, operating upon the anæsthetic vapor chamber, making it possible to continue anaesthesia and artificial respiration at the same time, is of first importance in clearing the way for those successful operations requiring pulmonary relaxation. 7. Ligature chambers, tray chambers, storage chambers, and receptacles for dressings, may be the subject of various and useful elaborations. Some will understand the importance of many of these details, and will appreciate the necessity of having the leading components operating in a harmonious and logical use. The table, as it now appears, is a mechanical structure, and the details of its construction can be better understood by referring to the illustrations than by any verbal description. Some of the details of the table are shown moved upon the table, and the table is shown moved into the position of use. The table is shown in two positions, one for use with the patient lying on the table, and the other for use with the patient lying on the floor.

The advantage of such an arrangement for supplying heat to a patient undergoing a severe surgical operation need not be dwelt upon, as it will be apparent; the only additional requirement necessary to mention is the use of a sufficient number of woolen blankets, folded and laid upon the steam-heated surface, to be again covered with a rubber sheet for the purpose of preventing the moisture of the patient's body from penetrating to the heated sections. This is a precautionary measure to be observed. The above view, also, shows the hollow sections hinged to the upper tie bars which support suitable bearings for a rotary shaft on either side of the table, the shafts being represented, one of which bears the mechanical device for giving rotary motion to the adjustable flexible drilling cable. The horizontal rotary shafts are driven by an electric motor concealed within the table.

Regarding the top of the table, another feature to be especially noticed is the manner of raising and lowering the Trendelenburg section. This

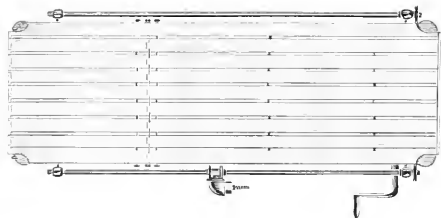


Fig. 3a.

is accomplished by means of two double-threaded high-pitched screws pivoted to the movable section and moved upward and downward by revolving nuts, held within

on the pivoted shafts of the thimbles containing the revolving nuts, each corresponding bevel-gear wheel being

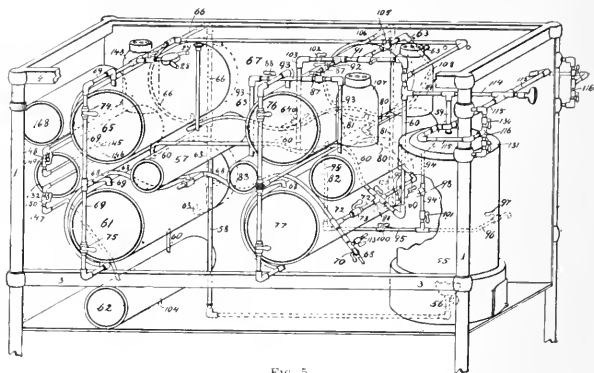
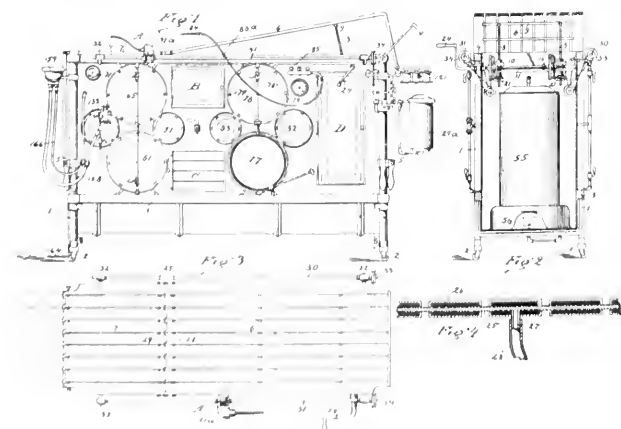


Fig. 5.

supplied with a small spur-gear wheel, which meshes with a large spur-gear wheel pinioned to the cross shaft and operated by a crank shaft shown in Figs. 1 and 2, No. 24.

The advantage of this manner of elevating the top of the table is that it does away with ratchets, and will remain immovable at any point of desirable elevation. The crank may be removed and sterilized at pleasure. Fig. 4 shows a cross section of the hollow bars composing the table top on line with the steam-supply tube represented also in Fig. 3, No. 25. In Fig. 4, No. 28, the flexible steam hose is shown attached. In Fig. 2 a boiler, No. 55, is shown as the source of steam supply; but it should be remembered that this is not necessary where any other steam supply is accessible. In Fig. 1, No. 83a, the flexible aspirating tube, supplied with cannula, is represented attached to a cannulated block, guarded by triple valves, illustrated in Fig. 10. Nos. 82 and 83, in Fig. 1, are aspirating reservoirs; Nos. 76 and 77 are sterilizers; *B* and *C* are tray cabinets; No. 57, a gasoline tank; No. 65, a cold-water reservoir; No. 61, a hot-water reservoir; No. 132, an etherizing apparatus; No. 127, receptacle for dressings; No. 121, ligature chambers, each and all of which are connected with the steam supply of the table. Fig. 5 shows all the receptacles with their connecting tubes and valves. It might be mentioned here that reservoirs Nos. 61 and 65 are connected with an air pump for the purpose of securing air pressure to force the fluids into a single common flexible tube for irrigating purposes. The scheme is to supply all parts with air, steam, and water, thereby making it possible to sterilize, wash, and supply needed pressure.

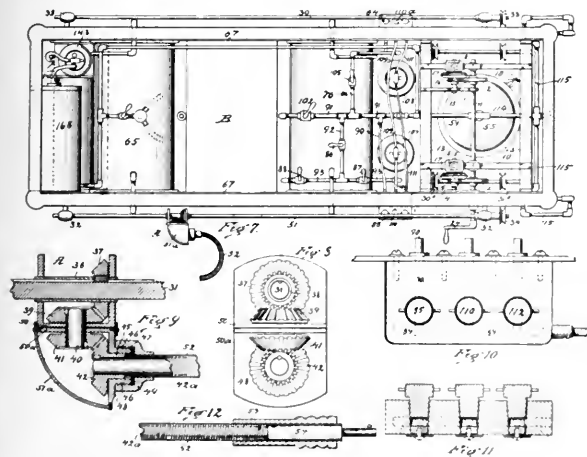
Fig. 7 shows the upper tie bars and a view of the interior of the table when the hinged sections removed. This illustration shows the gear wheels, their connections and relations, the different journals, and the reservoir connecting tubes, with their valves; also the two



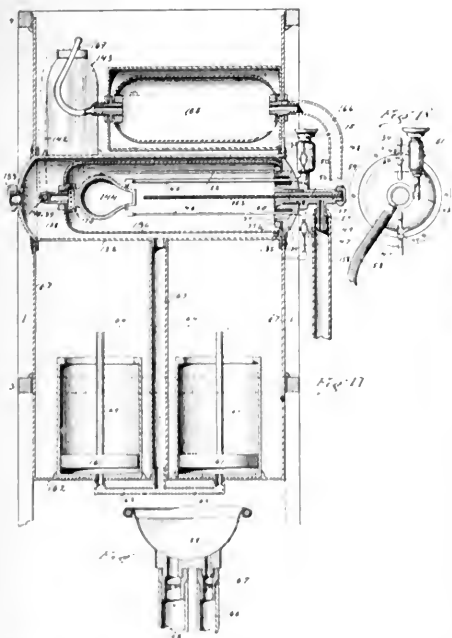
providing the table each of the revolving nut bearing upon the end of a bevel gear wheel, which bevel gear wheel meshes with a corresponding bevel gear wheel journaled

large wash bottles, Nos. 107 and 108, for antiseptic solutions connected on one side of the table with the common irrigator, and on the other with the aspirating

either side of the table, and is easily removed for that purpose or that of sterilization. Fig. 12 represents the chuck for holding a drill, saw, or milling tool. Figs. 17



apparatus. Fig. 8 shows the arrangement of the gear wheels used to operate the adjustable flexible shaft. Fig. 9 shows the same in their respective housings; and in Fig. 7, No. 51a, the device is represented in its proper



place on the horizontal shaft, where it can be moved along the shaft to any point and turned to any angle suitable for the operator. It is constructed for use on

when it is applied to a patient with the forced respiratory pumps in operation, artificial respiration is thereby conducted, and is regulated by the exchange of air occupying the space between the metallic wall of the receptacle, No. 132, and sac, No. 136. This, as will be seen, imitates the normal respiratory operation, and makes it possible to continue anesthesia at the same time. Should air be desirable instead of the anesthetic vapor, cap No. 154, opening tube No. 156, should be removed. This allows a stream of fresh air to pour into the ether sac, and may be substituted in artificial respiration for that of the anesthetic vapor.

Commenting upon the table, which, through fear of wearying the reader, I have just barely outlined, the features which deserve most attention are those relating to the warming of the patient, the side shaft with adjustable flexible cable, the hot-ether combination, the aspirating outfit, and the method of raising and lowering the Trendelenburg section. These are so valuable that I can not insist too much upon their importance. I have made frequent use of the table since its completion, and experience satisfies me that a new and rich field is under way of development. Patients undergo severe surgical operations on this table without the slightest break in their normal condition. I have experienced the beneficial effects too often not to know their proper valuation. Rarely do patients vomit from the inhalation of the warm ether, and they express themselves as being free from any nausea or sickness, and are perfectly willing to repeat the experience, if required. In leaving the subject, I desire to express the wish that the principles herein discussed may find their general use.

2123 ASHLAND AVENUE

MISCELLANY

Remarkable Instances of the Value of Suggestion in Therapeutics. In a paper read before the American Society for the Study of Suggestion at the University of Chicago, Dr. J. H. Crook, of the University of Chicago, presented the following cases:

fore the New South Wales Branch of the British Medical Association, the Hon. J. M. Creed, member of the Legislative Council, M. R. C. S. and L. R. C. P., Edinburgh (*Australasian Medical Gazette*, January 20th), said:

"I may, perhaps, best at this stage call your attention to a condition which I have been able to produce in a considerable number of subjects, and which I have not found described by other operators.

"It is so very remarkable that I have asked two gentlemen who are now present, both highly intelligent men, possessing more than average business knowledge and common sense, to permit me to show you by demonstration exactly what it is. They are both good hypnotic subjects, one of whom suffered from neuralgia, from which hypnotism quickly relieved him after somewhat prolonged suffering, the other having been persistently the victim of insomnia; he, prior to his being hypnotized, often remaining awake almost the whole night for days together.

"Since the first time I hypnotized the latter he has never for a single hour suffered in this way. Both of them are able to do as follows: On making use, either in my presence or when I am absent, of the arranged signal, which in the one is placing the forefinger of the left hand on the lips, in the other inserting the tip of either thumb between them, they instantly set up this extraordinary condition.

"To the bystanding observer there is no apparent change; the converse, go on with their occupation, and do everything just as if nothing had taken place; but in spite of all this they have, on using the signal, ceased to be sensible to pain. Nothing hurts them, and they can submit to being pricked, pinched, or otherwise maltreated without the slightest feeling. This you can test yourselves, for my patients, though, as you perceive, quite conscious of everything going on, will have no discomfort as the result of your efforts to hurt them. Nor are they only insensible to pain arising from injury inflicted while they are in this condition, but if at any time they have any, whether arising from accident or consequent on the morbid condition of any part (for instance, in toothache or neuralgia), by making use of the signal it ceases instantly.*

"As a case in point, Mr. H. could, and if you wish it, will tell you how, when a considerable quantity of molten and flaming 'Chatterton's compound,' the melting point of which is very much higher than that of sealing wax, fell upon his hand, the torture from which would, under ordinary conditions, have been both lasting and intense, and which had actually commenced, he by making use of the arranged signal never for one moment felt the slightest discomfort from it. I did not see him until a week after the accident, when he showed me a deep wound from which the eschar had separated. A more crucial test than this it would be difficult to conceive, and yet he assures me that from the moment he touched his lips with his left forefinger he suffered no further pain. Some time after this he came to consult me, having accidentally torn his hand to an extent which necessitated the insertion of several stitches after antiseptic cleansing. He made use of

his signal, and I did all that was necessary without his having a disagreeable sensation. He held his hand in any position I required, and assisted me in what I was doing, chatting all the time, being as interested and as little inconvenienced as if the little operation was being done on some one else. How long this condition would continue if left unchanged it is difficult to say, for I give my subjects the power to restore sensibility by another signal. I do this because, without the safeguard of pain, they might seriously injure themselves, and yet be unconscious of the occurrence. I would, however, point out that, though the power to feel pain from a fresh cause is restored, that which has been removed in this way does not return."

These cases are enough to prove to any thinking person that whatever genuine results are attained by Christian Science methods are attributable simply and solely to suggestion. The author further says:

"In my opinion, even in those instances in which recovery takes place under the exhibition of the remedies of the pharmacopoeia, success has frequently been the result of suggestion, unconscious on the part of both doctor and patient. In support of this view, I would ask you to call to your minds the success which often attends one practitioner in the use of drugs practically identical with those previously used by another one in a similar or even in the same case. But one inference can fairly be drawn from this—viz., that the former is able readily to enforce a feeling of confidence in the patient, and so more forcibly suggests that obedience to the instructions given will result in rapid recovery."

Exactly so. And it is by its claim to be based upon religion that Christian Science succeeds in establishing that feeling of confidence so necessary to make the patient susceptible to suggestion.

Errata.—In Dr. J. P. Crozer Griffith's article on *The Weight in the First Two Years of Life*, published in our issue for March 4th, two errors occurred. Chart III should have been omitted, and in the text, page 294, first column, beginning in the fifth line, the sentence "Camerer also gives some estimations of the rate of growth during the second year (see Chart III)," for "Chart III" read Chart II.

The New York Academy of Medicine.—At a stated meeting, on Thursday evening, the discussion on syphilis was continued, during which the following papers were presented: *Some Surgical Aspects of Syphilis*, by Dr. Frank Hartley; *Syphilitic Dementia and Paretic Dementia*, and *The Treatment of Syphilis of the Nervous System*, by Dr. C. K. Mills, of Philadelphia; *The General Diagnosis of Brain and Spinal-cord Syphilis*, by Dr. B. Sachs; *The Ophthalmological Aspects of Syphilis*, by Dr. C. S. Bull; and *Syphilitic Affections of the Respiratory Passages*, by Dr. Francke H. Bosworth.

At the next meeting of the Section in Ophthalmology and Otolaryngology, on Monday evening, the 20th inst., the following papers will be read: *Clinical Experience with the Large (Helm's) Magnet*, by Dr. H. Knapp; *Restoration of the Conjunctival Cul-de-sac by Means of Thiersch Skin Grafts*, by Dr. Charles H. May; and *The Use of the Extract of the Supratarsal Capsule in Diseases of the Eye*, by Dr. W. H. Bates. Dr. W. M. Leszynsky will present a case of acromegaly and Dr. H. Knapp will present a case of traumatic cataract and iris cyst.

At the next meeting of the Section in General Medi-

*The following footnote by the editor appears in the *Gazette*: "The subject when resuscitated produced the condition described, which was thought to be by the member present, who found that, though completely conscious and in possession of the fullest mental acuteness, he was quite insensible to pain."—*Ed. J. M. G.*"

cine, on Tuesday evening, the 21st inst., the following papers will be presented: A Case of Spinal Disease presenting Unusual Symptoms, by Dr. W. M. Leszynsky; Observations on the Treatment of Hay Fever: The Past Season; the Classification of Cases with and without Nasal Lesion; Cases of the Second Class; the Treatment of Cause, Attack, General Symptoms, and Inter-current Period; the Treatment by the Suprarenal Gland, by Dr. Beaman Douglass; and Atypical Forms of Pneumonia; a Clinical Account of a Hundred Cases with a Consideration of Gastric, Cerebral, Wandering, Abortive, Masked, and Chronic Pneumonia, by Dr. Emil Palier.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday, March 22d, Dr. Thomas J. Harris will read a paper on Sarcoma of the Nose, with a Report of Five Cases. Cases will be presented and new instruments, apparatus, and specimens will be exhibited.

At the next meeting of the Section in Obstetrics and Gynaecology, on Thursday evening, the 23d inst., Dr. A. F. Currier will read a paper on Tuberculous Peritonitis, and there will be a general discussion on puerperal infection. Dr. J. A. Schmitt will present specimens of uterine and ovarian tumors, and Dr. H. N. Vineberg will present an ovarian cyst with twisted pedicle and a hairpin removed from the bladder through Kelly's cystoscope.

At the next meeting of the Section in Neurology and Psychiatry, on Friday evening, the 24th inst., the following papers will be read: Jacksonian Epilepsy, with a Report of a Case Four Years after Operation, by Dr. G. M. Hammond; A Case of Facial Hemihypertrophy, by Dr. I. J. Walsh; and Hysteria in Childhood, by Dr. B. Sachs.

The Role of the Prevention of Conception.—According to the *Cleveland Medical Gazette* for February, citing the *Medical News*, *Troub* (*Centralblatt für Gynäkologie*, October 15, 1898) says that the principle, "No medical treatment without medical indication," does not meet all cases. Cosmetic operations are certainly justifiable. Not less so is the proper application of the *pessarium ocluserium*. This means of preventing conception is absolutely without danger. The danger for nervous persons lies rather in interrupted coitus and in the use of condoms. It is the duty of the physician to warn phthisical, epileptic, and neurotic persons that they ought not to have children. If a physician refuses, on account of Biblical or Talmudic law, to furnish to such persons the knowledge necessary to prevent conception, there is an end of medical scientific treatment. The significance of normal cohabitation is in general far too little considered. In men as well as animals the longing for coitus is not always associated with the desire for offspring, so that it is not right to speak of sterile intercourse as something contrary to Nature. Complete sexual abstinence is capable of working injury, if the attempts to overcome the desire for it put the physical and psychical powers of the individual to too great a strain. Voluntary sterility is allowable when the increase in the number of children would make it impossible that all should be properly brought up, or when the wife is not in physical condition to bear children. Preventive measures are abused by the rich, but they are too little used by the poor.

The Mississippi Valley Medical Association.—The twenty-fifth annual meeting will be held in Chicago

Tuesday, Wednesday, Thursday, and Friday, September 12th, 13th, 14th, and 15th, under the presidency of Dr. Duncan Eve, of Nashville. The secretary remarks that it has been some twelve years since Chicago entertained a medical body of national importance, and the profession of the city, under the chairmanship of Dr. Harold N. Moyer, is determined that this shall be a notable gathering in every respect. The committee of arrangements has in preparation a handsome souvenir booklet, containing a history of medical Chicago, which will also be the programme of the meeting. In honor of the association there will be given, before and after the meeting, a series of clinics at the various colleges and hospitals, a full description of which will be contained in the booklet referred to. Admirable arrangements have been made by the local committee for the places of meeting, both for the general sessions and for the medical and surgical sections. The rooms of the Chicago Medical Society, which will be the headquarters before and after the meeting for those who avail themselves of the clinics offered, and the Columbus Medical Library are very close to the place of meeting. The annual addresses in medicine and surgery will be notable. Particulars will be announced at a later date. In order that a place may be secured on the programme, titles of papers should be sent early to Dr. Henry E. Tuley, the secretary, Louisville, Ky.

The Northwestern University Woman's Medical School, of Chicago.—Dr. Marie J. Mergler has been elected dean, in place of Dr. I. N. Danforth, resigned. Dr. Danforth has been elected dean emeritus. The yearly course has been changed from one of two terms to one of four terms of twelve weeks each, beginning respectively on the 1st of July, October, January, and April. Three terms will be required; the other term will be optional. The number of regular students will be limited to a hundred, twenty-five in each class. They will be admitted to competitive examination for place in the class only after having complied with the requirements of the State board of health.

The International Medical Magazine.—We are informed that the *International Medical Magazine*, formerly published in Philadelphia, has been taken over by E. B. Treat & Co., of West Twenty-third Street, New York. Dr. Boardman Reed continues in his position as editor.

The Independent Medical College of Chicago Scotched.—According to the *Medical News* for March 1th, diplomas issued by this college have been recently declared illegal, and the charter of this institution revoked. Is the snake killed or only scotched? And if killed, will it prove a phoxix?

Anginal Attacks in Writers.—Macgrave's *Science of Medicine*, January 25th; *Independent Medical Magazine*, February 23d) describes a particular form of angina associated with the act of writing hurriedly, and only occurring under those circumstances. The cases are as follows: A person having to accomplish in a few minutes a great deal of time an important correspondence, was obliged to the task of writing letters on the subject of the day already seized with a severe pain behind the sternum. He became open to the attack, although his heart was on the point of being attacked. He experienced palpitations. The pain was very severe. If backward, when the crisis appeared, the writer again devoted himself to the task. The attack subsided, the

author says, are due to the position of the body in the course of work, added to the nervous superexcitation. In the attitude assumed when writing hastily the respiration becomes retarded, the expansion of the diaphragm becoming impeded by the compression undergone by the abdomen. Moreover, there is a kind of spasmodic contraction of the fingers which is communicated to the muscles of the forearm, the arm, and the thorax. The action of the heart is trammelled, especially as regards the right ventricle, which results in a certain degree of venous stasis, provoking a spasm of the coronary vessels that results in an angular attack.

A Convenient Way to Give a Vaginal Douche.—Dr. V. R. Pennock (*Colorado Medical Journal*, February) says that in ordering a vaginal douche it is very easy for us to inform our patient that she should use two or more gallons of a certain solution, instruct her as to the kind of a nozzle to use, the height of the reservoir, and to lie always upon her back. This last direction she is very apt not to follow unless taught a method more convenient than using old rags to collect the return flow.

He has used the following method for a few years and finds it convenient for douches, even after curetting at the patient's home:

An ordinary straight-backed chair is tipped forward with its top over the middle of a washtub. The chair in this position is covered with pillows and the patient places herself upon it, with feet on the edge of the tub and hips over its middle, supported by the back of the chair. There is no soiling of garments or bedding and the apparatus can be found in every home.

"How it's done" in Electricity.—"A certain physician," says the *Criterion* (*Electrical Review*, February 1st), "had a large Toepler-Holtz machine which gave a spark like a young streak of lightning. His wife was much interested in it and watched the doctor manipulate it until she fancied herself master of the apparatus. One day a party of friends called when the doctor was out, and the good wife seized the opportunity of paralyzing them with her knowledge of science. She was a very dignified woman of portly presence, and after leading them into the office, she began her explanation with all the impressiveness of a lecturer. She spoke briefly of the preliminary manipulation of the machine. 'And, then,' she said, laying her hand upon one connection, 'the electricity goes from here to here,' whereupon an angry white spark leaped out from the brass ball indicated, with a report like a horse pistol, and smote her upon the extended finger, causing her to sit upon the floor with a violence that shook the window panes. The guests stood around in expectant attitudes, looking at their fallen hostess in pardonable surprise. Only for a moment did that capable woman leave them in doubt: 'There,' said she, in the most matter-of-fact manner, as though events had simply followed the usual course, 'you see how it works. Now, let's go into the garden and look at the chrysanthemums.'"

The Fallacies that Beset Amateur Doctoring.—According to the *Boston Medical and Surgical Journal* for February 23d, a writer in the *Westminster Review* for January, 1899, p. 71, strongly sets forth the fallacies and mischief of amateur medicine. Failures to make the distinction between symptoms and diseases or between the different stages or degrees of a disease, or to note peculiarities of constitution, are sufficiently obvious

pitfalls. The syllogism employed is something like this: "My friend had a headache and was cured by iron; I have a headache, therefore I shall be cured by iron." But headache is not a disease; it is a symptom, and occurs in a large number of diseases, of which hyperæmia of the cerebrum and anæmia thereof may be taken as examples. When the name of the disease is substituted for that of the symptom the syllogism becomes nonsense, thus: "My friend had anæmia and was cured by iron; I have hyperæmia of the brain and, therefore, shall be cured by iron."

Another Case of Double Ovariectomy during Pregnancy.—Dr. R. A. Kingman (*Boston Medical and Surgical Journal*, February 23d) records a second case of double ovariectomy during pregnancy, in this instance there being a hydatidiform mole. In the same journal for July 29, 1897, Dr. Kingman reported a first case of double ovariectomy during pregnancy, in which case two abdominal tumors of considerable size were removed and the pregnancy went on to term. Dr. Kingman remarks upon his present case as follows:

"This case presents points of interest both for the gynecologist and the obstetrician. Both will note at once the difficulty presented in attempting an accurate diagnosis, owing chiefly to the change from the customary signs of pregnancy, due to the presence of a mole rather than a living embryo in the uterus. The rapid enlargement which takes place in such cases, commonly about the third month, had already caused marked thinning of the uterine wall, and the shape of the tumor was strongly ovoid instead of spherical as in ordinary pregnancy. From the gynecological standpoint, I would particularly call attention to the striking absence of vascularity in the pedicle as contrasted with the case before reported. In that report I said: 'The only unusual condition noted in consequence of the pregnancy was the extreme vascularity of the pedicle, which consisted of the whole breadth of the broad ligament. It seemed a mass of dilated, tortuous veins.' The explanation of this difference must be found in the fact that the uterus did not contain a living ovum, and Nature had therefore failed to provide for a continuance of development. A point noted before is again emphasized by the occurrence of pregnancy in such an advanced stage of disease of the ovaries. There seemed no true ovarian tissue left, and yet an ovule was brought to maturity and impregnation resulted, for it is an accepted fact that hydatidiform mole can not occur without conception. Here, however, our knowledge of the etiology of this condition seems to be at an end, and in this connection this case assumes its greatest interest to the obstetrician. In view of the rarity of the disease, this is probably the only case on record in which the inside of the abdomen and pelvis have been observed during its continuance and in the living subject. True, the case reveals no conclusive evidence upon which to build a theory, but it at least suggests the possibility that the advanced disease of the ovaries may be responsible for a lessened vitality in the ovum, hence leading to the disease of the chorion and the death of the fetus. The prompt delivery after the operation can not be attributed to the latter, as hemorrhage had begun the day before and expulsion of the mass could not long have been delayed."

A Possible Danger of Artificial Respiration.—M. Brosch, of Vienna, while making experiments on the

cadaver, noted a possible danger of artificial respiration, which was recorded in the *Progrès médical* for September 24, 1898, p. 213. In the issue of the same journal for January 28, 1899, Dr. R. S. Stewart records a case which emphasizes this danger. A patient in the Glamorgan County Asylum, Wales, forty years of age, the victim of mania of seven years' duration, had to be fed by an attendant, not from any difficulty of swallowing, but because of his violence. On December 17th there was served to him a supper composed of bread soaked in milk and well pulped, in quantity a little less than a pint. The entire amount was administered without any difficulty, and without any indication that the food had taken any unusual course. After some moments, and without any warning, the patient's head fell back and he became pale as death, displaying neither pulsation nor respiration. Immediately the attendant placed him in the recumbent position and began artificial respiration after Sylvester's method. Some minutes later the physicians found an entire absence of either pulsation or respiration, and were unable to discover any cardiac action. The mouth and pharynx were perfectly empty. The attendant observed three or four light respirations after the syncopal attack. The autopsy was made seventeen hours after death. There was *rigor mortis*, and the entire surface of the body was of a pronounced pallor and not at all livid. The brain was atrophied and oedematous, the meninges thickened, opalescent, and half full of fluid, but there were no adhesions. The cerebro-spinal fluid was in excess, but no gross lesion was discoverable. The pericardium contained nearly a centilitre of transparent fluid. The heart, which weighed three hundred and twenty-five grammes, was soft and flaccid; the auricles half full of fluid and dark-colored blood; the ventricles empty, with the exception of a small clot, somewhat dense, half pallid and half dark-colored, which was found in the muscular recesses of the lower portion of the right ventricle. There was advanced atheroma round the orifices of the coronary arteries and on the inner surface of the ascending aorta to the extent of five centimetres. The left lung weighed about five hundred and sixty grammes and the right lung five hundred and ninety grammes. There were no adhesions, and the surface was perfectly normal in appearance. On examination, food *débris* was found in each bronchus, and incision of the lungs showed similar *débris* in the smallest bronchioles, especially in the lower lobes. In other respects there was nothing abnormal save a slight congestion of the posterior and lower parts. There were no foreign bodies either in the mouth or pharynx, but in the upper part of the trachea was found a very small quantity of pulped aliment. The stomach contained about five centilitres of food, and the lining membrane was in every respect normal.

In this case death evidently resulted from sudden heart failure, which often occurs when the coronary arteries are degenerated at their origin, and it had no relation to any interference with respiration. There were no signs of asphyxiation. At the moment of the syncopal attack the stomach contained a pint of aliment; at the autopsy there remained only a tenth of this amount. It is impossible that what had disappeared from the stomach should have entered the lungs, for they were not in excess of their normal weight; a considerable portion must therefore have passed by the pyloric orifice into the intestine. The matter found in the lungs evidently came from the stomach, from which it would appear that the cardiac orifice of the stomach

can easily be forced, at any rate in the cadaver, and its contents be passed along the oesophagus up to the pharynx by the compression of the lower part of the thorax (the usual method of expression of air from the lungs) and inspired in the ordinary way at each successive artificial inspiration. It is not certain that the contents of the stomach can under similar circumstances pass with equal facility into the lungs of a living subject without his cognizance, but if it should be so, then the danger is a very real one. In the present case, if by any chance the syncope had not been instantly fatal, recovery would have been scarcely probable, for death by asphyxia would have ensued. Consequently, in all cases of suspended respiration, if there is reason to suspect that the stomach contains nourishment or any liquid whatsoever, it is requisite to empty it by means of the tube if possible. If this is not possible, Sylvester's, Marshall Hall's, or Howard's method of artificial respiration should be avoided, and efforts should be made to reestablish breathing by rhythmic traction of the tongue. That is the only method of avoiding asphyxiation by the passage of foreign bodies from the stomach into the respiratory passages.

The Treacherous Lulls of Appendicitis.—Professor Dieulafoy (*Presse médicale*, February 8th) thus concludes a paper on the Deceptive Lulls of Appendicitis: 1. The marked and painful symptoms of appendicitis, the vomiting and the fever, are often followed by an abrupt lull with disappearance of the pain, fall of the fever, and a general sense of relief to the patient. 2. This abrupt lull, this deferescence, is not always the sign of a real amelioration; it is often false, deceptive, and treacherous. 3. It must further be remarked that this misleading and treacherous lull often coincides with the formation of most dangerous lesions, gangrene of the appendix, peritoneal septicæmia, and diffuse peritonitis. 4. The treacherous lull is never a complete lull. Regarded closely, it is seen to differ from a real amelioration by the persistence of some symptoms. In the case of an apparent calm the abdomen remains more or less tympanitic, the muscular resistance does not always disappear, the amelioration of the pulse persists, even though the temperature may have fallen, and urobilinuria and albuminuria are not rare. 5. This false retreat in appendicitis is sometimes favored by medication, injections of morphia, the application of ice-bags, etc., which mask the evolution of dangerous symptoms. 6. It appears at variable intervals, as shown by the author's observations. 7. The lulls coinciding with the development of the gravest peritoneal lesions show, moreover, the inexactness of the descriptions which distinguish by well-marked lines appendicitis from peritonitis. Such descriptions perpetuate fatal errors; frequently the symptoms of appendicitis and of peritonitis are similar, concurrent, and mixed, so that it is impossible to decide at what moment peritonitis sets in. 8. These treacherous lulls in appendicitis are the most frequent cause of death. A physician or surgeon of too hesitating a character eagerly seeks upon this apparent lull in the disease to adjourn or avoid any intervention, believing that there will always be time to operate at leisure later; but meanwhile the disease advances interference, against which surgical means are powerless, and the patient succumbs. 9. We must, then, distrust these treacherous lulls of appendicitis, and learn to recognize them, and operate without delay, for we would not expose our patients to the risk of death.

The Ideal Doctor—Genius, Philosopher, and Lover of Goodness.—The Syracuse Professional Women's League recently held a banquet at which Dr. Anna Manning Comfort was to speak to this toast. She was unable to be present, but she dictated the following response, which was read by another woman physician:

The long-accepted custom and maxim that "the brethren embrace the sisters" seems so firmly established as to almost defy uprooting. For, whenever and wherever women are co-workers with men, all generalizations bearing upon them are expressed through the masculine pronoun "he," but, since women have become an all-embracing sisterhood, why should we not, with *fin-de-siècle* progress, institute a reversal of this usage, and thus prove to our brothers that we can be as gallant and all-inclusive as they? Highly improper as it is deemed to thus embrace the men, I will boldly venture the innovation for this once, begging the protection of my professional sisters, and will proceed to portray the "ideal physician," under the feminine pronoun "she."

"The ideal physician—genius, philosopher, and lover of goodness." Extravagant as some of these qualifications at first appear, they are not so in fact. For what, if you please, is not expected of the ideal physician? First, general scholarship; next, specific preparation and high attainments, with experience and skill. But, superadded to this, there must be a marked personality, a strong body, a vigorous mind with extraordinary individuality of character. Aye, indeed, if she is all that the world expects of her, she is in truth a genius.

Her life must be absolutely unselfish, while she must possess every positive and negative virtue known to the human family. Ever alert, ardent, and tireless, she must respond to suffering's call, ready on the instant to diagnose, prognosticate, and treat anything and everything, from a simulated or threatening ailment to the last throes of physical agony. She must quickly and accurately define the meaning of ill-defined or half-expressed symptoms, as met with in the infant, deaf-mute, idiot, or inebriate, in states of cerebral stupefaction or delirious excitement, such as apoplexy, epilepsy, hysteria, insanity, syncope, special injuries, or toxic action of drugs. For all this, the ideal physician must possess keen, intuitive perception, no less than specific medical knowledge. She must be ready, in emergent conditions, to improvise by her wits all lacking appliances, such as instruments, medicaments, or other needed aids; furthermore, to bathe, clothe, feed, and generally nurse an exceptionally suffering patient on call; to dominate by her will the patient's fears; to quell all attendant excitements; and to extend comfort and hope to the family of the sufferer.

These are some of the requisites demanded in the ideal physician on a sudden summons. Furthermore, when she is brought close to the ignorant, diseased, vulgar, or untidy, she must neither feel nor evince the slightest fear or repugnance, but she must be at once pitiful and firm, tolerant, tactful, and controlling, with wits alert for any and all professional inquiries or assertions, from the most ludicrously ignorant to the most profound and abstruse. She must have a memory that never lapses, but that will ever unfailingly carry the face, name, and medical history of every patient to the end of her days. Yes, naught but a genius could thus have all her powers in full readiness on a moment's call; and, yet, all this and more is expected and exacted of the ideal physician.

In person, she must be immaculate, while not fastidi-

ous; in spirit, daring, yet cautious; forceful, but gentle; earnest and dignified, sympathetic and patient; cheerful, affable, and brave; and, despite and even because of these almost superhumanly opposing qualities, the ideal physician must stolidly submit to be "called names," such as "how masculine," "how feminine"; and, although a veteran in her profession, she must, with gracious equanimity, frequently hear herself addressed or spoken of as "Miss" or "Mrs.," while her freshman brother, yet in college, is respectfully addressed as "doctor." And she must never be so indelicate as to rebuke another for this bit of injustice, not even her club sisters, who, by the way, I regret to say, are not always exempt from this offense. And her generous composure is further tested, on opening her daily mail, to find herself therein often tenderly addressed as "Dear Sir." At this point, we decline to embrace our brothers, and "she" is strongly and especially italicized. To proceed, she must be genial, buoyant, and responsive, however oppressed by professional care and anxieties or by the most suffocative confidences. She must be faithful to all the dark secrets and tragic histories of her patients, regardless of their desertion or their possible abuse of her in turn.

Again, the ideal physician must be boldly progressive and wisely conservative. She must love her profession and sacrifice herself ever to its noble service. She must work by day, study by night, with or without food or sleep; she must have the courage of her convictions, "neither buying nor selling," fearlessly and conscientiously serving this one, counseling that one, pitying here, rebuking there. She must, in truth, preach as well as practise, hoping little, fearing less; and she must also be humorously gifted, ready on the moment to give and take the salty of wit, though the next moment she gives judgment of death or stands beside the dying, for the power of innocent wit and judicious satire are important medical adjuncts. Thus, I repeat, this almost phenomenal combination of personal qualifications constitutes the ideal physician a genius indeed.

The ideal physician must also be Christian or philosopher, or, indeed, both, for upholding herself and the suffering one she serves. Mortal agony, mental hallucinations, heart distractions, and soul despair in a patient must often be controlled by citing the Christian promises, such as "rest for the weary," "take no thought for the morrow," "let not your heart be troubled," "peace be unto you," or by philosophical precept and admonition, such as "be sorry for nothing," "fear naught, fear not." Yes, the ideal physician must ever be the ready philosopher, as against all the odds and in the most desperate circumstances.

But, even more, the ideal physician, to kindly and nobly serve, must ever be a true lover of goodness. And the two proverbial pockets—the one, deep and capacious, for neglects and indignities; the other, the diminutive one, for honors and moneyed returns—are not sufficient to her needs. She must recognize no neglects, resent no criticisms, forgive all injuries. The ideal physician labors for results, not financial returns, and, aye, great the difference! So, deep in her heart is the third receptacle, where reposes the memory of every noble endeavor, of every expression of gratitude, of every sufferer helped, and the happy consciousness that a nobler, grander profession does not exist in which to labor with, and to serve, our suffering humanity. I therefore herewith render ardent homage to the medical profession and to its many ideal physicians.

Original Communications.

THE UNITED STATES ARMY RATION,
AND ITS ADAPTABILITY FOR USE IN TROPICAL CLIMATES.

By LOUIS L. SEAMAN, M. D.

(Concluded from page 379.)

In the command to which I had the honor of being attached as surgeon, the First United States Volunteer Engineers, the health of the troops was nearly perfect while in camp at Peekskill during June and July. Every recruit was vaccinated. Only one serious case of illness developed in the entire regiment, a pneumonia, the result of exposure in a cold storm at night, when the soldier was on sentry duty. During our encampment at Peekskill the State caterer supplied the troops with food fairly well adapted for a temperate climate, but unfortunately not such as should be selected for preparing them for a tropical residence. At my suggestion, and by order of General Griffin, the meat ration was reduced, and an equivalent of rice or meal substituted once daily, with an extra allowance of syrup, greatly to the benefit of the men, who previous to this time had suffered considerably from constipation. An encampment of seven weeks in Peekskill, where the regiment was mobilized and mustered, made it possible to eliminate every man who, after having been accepted, showed evidence of physical weakness, whether that weakness was induced by the change in the manner of living, or arose from defects that did not appear in the rigid physical examinations to which recruits were subjected.

Under orders from the secretary of war, we embarked from New York, August 6, 1898, on the transport *City of Chester* with a total of 1,114 officers and men, and arrived at Ponce, Puerto Rico, on the 16th of August with every man in fine physical condition. On November 17th we reembarked from Ponce, reaching New York on the 24th, and bringing with us a total of 904 officers and men. Of this number, 102 were convalescent or in the ship's hospital, while a large proportion of the remainder, if not invalided, were greatly reduced in weight and power of resistance. Of the remaining 210 who had gone with us, 12 were dead, 61 were left behind in the hospitals of the island, and 167 had been returned to the United States invalided, or as honorably discharged from the service. During the three months we were in Puerto Rico more than half the regiment had at some time been under treatment, a condition entirely unexpected, for the most stringent precautionary measures had been adopted to guard against disease. Camp sites were chosen with special regard to their sanitation, the highest and best drained localities having been selected, except during the first week, when we were temporarily camped at the Playa at Ponce, while engaged in unloading our

equipment and impedimenta. The latrines were placed at remote distances from the camp, were deep, were disinfected three times daily, and later were darkened by being inclosed with planks. Water for drinking purposes was procured from the purest available sources, and was boiled and filtered before being used. A thorough and rigid inspection of food and cooking utensils was constantly enforced, and camp discipline so excellently maintained that there was little drunkenness among the men. Personal cleanliness was also required, bathing twice a week being obligatory, and there were no forced marches, or undue exposure to the sun, engineering work and drills being suspended during the hottest portion of the day. We had medical supplies in abundance, and my assistants were able, efficient, and conscientious in the performance of their duty. Yet hundreds of cases of serious forms of gastro-intestinal catarrh and fever rapidly developed. With few exceptions the entire force suffered from some form of intestinal catarrh within a week after our arrival in Puerto Rico, due either to a change in drinking water, slight colds resulting from sleeping on the wet ground, eating fruits to which the men were unaccustomed, or the extreme relaxation of the system resulting from exposure to tropical heat, and the use of the rations provided. This catarrh continued most persistently and could scarcely be controlled by medication, for the diet, which should have been rice or some non-irritating food, proved a continual excitant to the disease. It consisted principally of fatty bacon, salt beef, canned tomatoes, frequently in a state of fermentation due to the intense tropical heat, canned beans, and hard-tack. The result was an aggravation of the disease, and the loss of weight to the soldier of from ten to fifteen pounds, in many instances much more. This loss represented a great latent power, a reserve force which stood between the soldier and disease, and which, when removed, left the system open to the invasion of malaria and typhoid fever and gastro-intestinal derangements of serious moment. His power of resistance was gone, and the virus of malaria and typhoid found in him a fruitful culture ground. Under such circumstances it was not surprising that the hospital was soon overcrowded, and the precautions taken against disease had little or no effect in warding it off. The most distressing feature was that the conditions were unavoidable, for the government had up to this time made no adequate provision for furnishing our men with other than the regular ration, and this was not only unsuitable, but was, during the climate, making serious inroads upon the health of the command.

The travel ration composed of 5 lbs. of hard bread commonly known as hard tack, 1 lb. of salt beef, canned, three quarters of a pound of dried beans, or canned tomatoes, a third of a pound of coffee, 1 1/2 lbs. of a pound, 1 lb. of sugar, 1 lb. of fat, and 1 lb. of

The troops who fought at Siboney and San Juan Hill ate this ration when they could get it, and this ration alone, except such additions as those Colonel Roosevelt added from his private purse, for nearly four weeks. We had it for nearly three weeks. It is intended as an emergency ration, to be used when troops are on the march or separated for a short period from their cooking facilities; but its effect on the American army, in the intense tropical heat of July and August, is recorded in the surgeon-general's office; or in the living pictures presented by the emaciated forms of convalescent troops sent home by the hospital transports; or is buried six feet or less deep in the soil of our new possessions.

The prevalent disease affecting our troops during the summer was primarily acute intestinal catarrh of a very debilitating type. At one time fully seventy-five per cent. of the soldiers were ill with diarrhoea, largely incapacitating them from the performance of their regular duties. Later, malarial fevers began to develop, of the intermittent and remittent types, and early in September typhoid fever manifested itself and continued to affect the troops with greater and greater severity until our departure for home in November. Nor has it yet stopped. In the moisture and intense tropical heat at Ponce the spores of microbes of typhoid were everywhere present, having been brought to the island by the troops from Tampa and Chickamanga. Probably many of them found entrance to the stomach or intestinal tracts of our men, and would have passed through harmlessly had the gastric juices and intestinal secretions been normal. The virulence of the germs became apparent only when the system was found to be in a debilitated condition, or the quality of the secretions was impaired. Under these circumstances rapid reproduction of the microbes occurred and typhoid was found in every camp on the island, having been disseminated through the agency of the myriads of flies with which the atmosphere swarmed. No case of typhoid or malaria had been known among the engineers from the time of their recruiting in June till nearly three weeks after their arrival in Puerto Rico. Indeed, through the entire summer the percentage of sickness with them was less by half than in many of the other commands on the island, regular or volunteer.

For a week after landing, our regiment, as before stated, was subsisted on the travel ration. Regular field rations were not issued until August 23d. By that time the beef brought from the United States had become so tainted that it had been condemned by a board of survey and buried. Fresh beef was contracted for, but, owing to climatic conditions and lack of facilities for keeping, it was necessary to consume it the same day it was killed, notwithstanding its flatness and unpalatable taste. The greatest difficulty was also experienced in obtaining rice and fresh vegetables from the commissary department. Those brought by the regiment rotted on

the ship before they could be landed, and those issued by the commissary were so decayed as to be, for the most part, unfit for use. I believe if we had had a cargo of rice and potatoes in Ponce in August the sickness of the army there would never have reached half its proportions. This condition of affairs continued until the 20th of September, when new supplies arrived and we were in a measure relieved. Whenever fresh meat was issued by the commissary the soldiers were compelled to accept it, often against their protests, but it was a "perishable article," and the United States army regulations do not permit any commutation for perishable articles. So there was no changing it for other food. The effect of such fresh meat upon troops is notoriously injurious in tropical countries under certain conditions, often producing diarrhoeas of an almost epidemic character.

My experience while in charge of the convalescent camp of the Nineteenth United States Infantry, where there were many hundred troops at various times from the Second and Third Wisconsin Volunteers, the Sixth Illinois, Sixth Massachusetts, Sixteenth Pennsylvania, and other regiments, and the overcrowded hospitals at Coamo and Ponce; and the opportunities I had for observation while supervising the loading of transports with convalescent soldiers, convince me that had the ration been promptly changed when its evil effects were first observed, transport after transport would not have been sent home loaded with emaciated, broken-down soldiers. As I have stated in the *Century Magazine* of this month, had the ration received the attention it called for, there would have been comparatively little sickness, and hospitals would have played a minor part in the tragedy of the war. The hue and cry raised all over the country that medical supplies were insufficient was based upon false rumor. We had abundance—far more than we could use. It was not drugs that the soldiers needed, but proper prophylactic treatment—diet, well-regulated diet—and that could not be obtained during the month of August and the greater part of September, except through private sources and the Red Cross and relief societies. The fresh milk that was so essential for our hospital patients during these two months was furnished by two charitable individuals, while the food supplied by the Red Cross Society proved a veritable godsend.

A recent order of the surgeon-general has happily allowed the sick in field and regimental hospitals sixty cents a day as commutation for ration, the same privilege as that enjoyed by division and general hospitals. But this allowance should be still further extended so as to include, at the discretion of the surgeon in charge, those men reported as "sick in quarters." These men are frequently in as great need of a change in ration as those actually in hospital, and in many instances it would save them from eventually becoming hospital patients.

As before stated, for a temperate or northern latitude, the army ration is fairly satisfactory; but in Puerto Rico and Cuba, where the temperature ranges high, and where the conditions predispose to bowel complaints among unseasoned troops, it is totally unfit. No better evidence of this can be had than in the hospital records, where it is shown that the best results in treatment were obtained, not by the use of drugs, but by placing patients exclusively on a milk diet. In the hospital of the quartermaster's department, under the care of Surgeon Moret, a native Puerto Rican, where I was frequently called in consultation, there were a hundred and thirty serious cases of illness, all of whom were put on a diet of pure milk. In every case but two, and these were hopeless on admission, there was rapid recovery, a fact which tends to show that had the army been provided with a ration in which the carbohydrates were given a greater and the nitrogenous-elements were given a lesser part, there would have been far less recorded sickness and mortality. Indeed, I am fully convinced that had our army been properly prepared for tropical service by being fed on a judicious diet prior to the invasion of Cuba and Puerto Rico, and during its stay in the tropics, sickness and mortality would have attained very different proportions.

The pathological features of the cases on which we were fortunate enough to hold autopsies, whether the causes of death had been pronounced intestinal catarrh, hepatitis, duodenitis, typhlitis, enteritis, enteric or typhoid fever, colitis, dysentery, or diarrhea associated with malaria, presented many similar characteristics. The liver was almost invariably congested. The mucous membrane of the intestine was pale and covered with a thick, tenacious, adherent mucus; the mucosa was hypertrophied, often deeply congested, and ulcerated; in two instances these ulcerations almost encircled the entire tube. The toughness of the opaque secretions obliterated the intestinal glands, causing atrophy, and thus interfering with absorption and metabolism. The solitary follicles stood out with prominence, and the patches of Peyer were distinct, often with minute ulcerations on the surfaces, notwithstanding many of the cases in which they were found presented no characteristic typhoidal temperatures, and during life failed to respond to the Widal reaction.

Why is it that a simple intestinal catarrh, a diarrhea with malaria, a mild duodenitis or enteritis is aggravated when salt meat, beans, fat pork, fermenting tomatoes, etc., are taken into the intestines? Because they act as irritants, exciting instead of allaying inflammation, thus engendering a comparatively trifling disorder one of serious proportions. One was almost as much puzzled to know how to sign a certificate of death after an autopsy as before, for the diseases seemed to be blended, the areas of congestion or inflammation being only slightly interrupted, or of a general character. The diagnostic features were so tangled and massed as to

make differentiation extremely difficult, and to almost lead one to the conclusion that the enteric diseases prevailing last summer in Puerto Rico and Cuba were of a new form or development. They were the result of a tin-canned-salt-junketed-fermenting-tomato-salt-pork diet, intensifying a simple catarrh; and resulted in sending so many of the rank and file of our men to the hospitals of the North, or elsewhere, in the pitiable conditions with which you are already too familiar.

The simple catarrhal affections of the stomach and upper intestinal tract, not resolving rapidly, will lead, under an unsuitable dietary, to congestion of the liver, with all the dangers attached to such a state, in a climate where the natural antiseptics of the intestine is of such paramount importance. The reduction in quantity of bile will lead to auto-intoxication and extension of the processes of inflammation, until the entire intestinal tube may be involved, and jaundice, duodenitis, enteritis, and colitis are developed—conditions which are an open door for all micro-organisms that can find entrance.

A much greater flexibility to the ration will be absolutely essential if Congress adopts the practical lead of England in garrisoning our tropical possessions with native soldiers. England's success in this line has been so great that the next addition to her colonial army will be known as "The Wei-ba-Wei Battalion," made up of Chinese. In Africa she employs the African; in India, the native regiments, especially the Sikhs, who are among her most formidable fighting machines, and on whom in her border wars she places her chief reliance. I have seen these magnificent specimens of manhood, often six feet six to six feet eight inches in height, serving as her guardians of the peace, in the various coast cities of the Orient, and few soldiers present a finer appearance. In South Africa she has a regiment of Zulus; in Jamaica, natives are employed. Indeed, wherever the flag of England floats there you will find garrisons selected from her colonists, and her own regular army is rarely called upon for service except in sudden emergencies or the event of war. Her example must soon be followed by us in our tropical possessions unless we wish to establish a mill for the physical degeneration of the flower of our army, and a further apology for the extension of our pension rolls.

Since the ration, then, has proved such an improper diet in the tropics, the question naturally presents itself, What is a *suitable* ration? Before proceeding to make suggestions in answer to this question, it will be well to point out more specifically the defects of the present ration, which consists, as will be seen from the chart, principally of salted and fresh meat, flour or flour, canned beans and tomatoes, and a small quantity of cereals, with little provision for the fruits and vegetables. The experience of the British in Barbadoes and the West Indies has shown that the salt ration is the greatest predisposing cause of bowel complaints. As stated by Dunn

can: "In the first Burmese war, for six and a half months the troops had salt rations shortly after its commencement, and forty-eight per cent. of them perished within ten months, principally of scorbutic dysentery; while in the regiment of Cameronians, seven hundred out of nine hundred were rendered unfit for duty from the same cause within a period of two months. In both instances these diseases were induced by an almost exclusively salted diet, which not only irritated the intestines, but did not furnish sufficient nutriment. It was observed in the West Indies, in the Windward and Leeward command, that after an issue of salt rations five days in the week, the mortality among the officers was two to four per cent., while that among the men was twenty per cent. When the issue of salt ration was reduced to two days a week the mortality among the men was soon the same as that of the officers."

Next to that of salt rations, an excess of fresh meats is a cause of bowel derangements. This was strikingly shown by Lamaran, in the French campaign in Algeria, when the men ate excessively of captured mutton, and rapidly succumbed to bowel disorder. As previously stated in my own experience in Puerto Rico, it was observed that when men already sick with diarrhea from eating the regular meat ration were placed on a diet of milk, they in most instances rapidly recovered with little or no medication.

Another article largely issued in the late war, and which was found to be very objectionable in the tropics, was the tinned and also the dried bean. It was observed that every issue of beans after the men had been a short time in Puerto Rico was followed by an increase of diarrhoea. The beans often fermented in the stomach or intestines, and were frequently passed from the bowels unchanged. This result occurred with the canned baked beans, which were of excellent quality, as well as with the cooked dried beans. No trouble was found to follow with the eating of the red or black bean, the *frijol* of the country.

Owing to its heat-producing qualities and its irritant effect upon the intestine, the *salt-pork ration* should be greatly reduced in quantity, and should be issued but once in a week at most. This ration was almost wholly rejected by the men of my regiment in Puerto Rico, and was useful principally as a means of exchange for fresh vegetables.

The canned tomatoes furnished to the troops during their service in Cuba and Puerto Rico, and of which there is a sufficient supply piled up in the Government storehouses of the island to last several years, do not take the place of the fresh product, which in nearly every place is plentiful, and so cheap that six or eight can be bought for a centavo (half a cent). The tinned goods are frequently found in a state of fermentation and should never be issued when the fresh article can be obtained.

In making suggestions for the selection of a proper

ration for troops in hot climates, it is not proposed to go extensively into the question of the relative amounts of carbon, nitrogen, and salts required to yield the necessary foot tons of energy to enable the soldier to perform his daily task. These are already sufficiently well known, and the present ration of the United States army, although susceptible of improvement, answers well its purpose in temperate or cold climates. My object is to select a ration which shall furnish the necessary energy, and which at the same time can be digested and assimilated in a tropical climate without damage to the digestive apparatus. It is well known, and but little actual observation is needed to convince the most skeptical, that the conditions of heat, moisture, and malaria inevitable to service in the tropics, especially in the summer months, predispose powerfully to both catarrhal and inflammatory diseases of the liver and intestinal tract. In a large proportion of the men these diseases, as before stated, are manifested soon after their arrival, especially in the summer, no matter what sanitary precautions are taken. If, then, the soldier is fed upon an unsuitable diet, it takes but a short time for the intestine to reach the condition described under the head of pathology, and he is either soon dead or invalided home. If, on the other hand, a suitable, unirritating diet is provided, the simple catarrh will soon disappear, and in most cases sanitary precautions, supplemented by an appropriate ration, will prevent its reappearance.

In view of these facts, the first requisite of the ration is that it shall be *non-irritating and easily digested*. It must also be easy of transportation, proof against climatic changes, and susceptible at all times of the greatest flexibility. None of these requirements does the present ration meet as it should. It has been abundantly shown that with the great majority of the men it can not be properly digested. It is none too easy of transportation, as was evidenced by the meagre supply of food some of the troops had to subsist on during the summer campaign. It is not wholly stable in all climates, as we have already observed, and it is not sufficiently flexible for use in all climates. In fact, it is scarcely flexible at all, except in garrisons, where to a limited degree certain of the articles of its constituents may be commuted for other supplies in kind, or for their money value. In the latter instance the money goes into what is known as the company fund, whence it is drawn for the purpose of such variations in the diet as the company's commander may see fit to provide for his men. Post gardens sometimes add to the bill of fare, and, by lessening the demand for full commissary rations, increase still further the company fund; but the flexibility of the ration should not be made to depend upon post gardens or company funds—it should be a characteristic of the ration itself, and no new formula of diet should be enacted by Congress in which this is not embodied.

In the changes I have to suggest for feeding the army under tropical or subtropical conditions, it is not proposed to recommend a complete ration with the definite quantities of its various items, but rather to point out briefly such changes as experience has shown to be necessary to fit the ration for the use intended, and I would say that these imposed changes have met the approval of many officers with whom I have discussed them. These recommendations are as follows: The beef component and the salt pork should be reduced *one half*, farinaceous food being substituted therefor. Salted rations should be issued but once, or at most twice, during the week. Fresh meats should be provided from animals slaughtered at the point where issued. At points where native cattle in good condition can not be procured, cattle from Texas can be as easily transported by the government of the United States as the merchants who now supply the Cuban markets from Texas and Mexico. Of the cereals, one of the best is hominy. The hulls of the maize being removed in the course of its manufacture, this source of irritation is avoided, while the grains, when softened by a thorough cooking, are nutritious, easily digested, and relished by the men. Equally valuable is the ration of rice now issued, and which should be quadrupled in quantity.

The white bean of this country should *not* be issued for use in the tropics for the reasons previously stated. In its place should be used the black or red native bean (*frijol*), which, while resembling the common bean in shape, is very different in its properties. The hull is much thinner, and when thoroughly cooked does not irritate, while the pulp is drier, breaks up readily with cooking, and is easily acted on by the digestive fluids, and does not produce irritation.

This bean, together with the tortilla, practically made from hominy, forms almost the entire diet of the Mexican army, and there are few if any soldiers who can endure greater fatigue, or make longer marches, or among whom is less sickness from dietary causes.

In addition to the above, dried fruits, especially apples and prunes, should be added to the ration. Their effect when used in Puerto Rico was invariably observed to be beneficial.

Another and very marked factor in the development of the intestinal troubles which so seriously affected the army in Cuba and Puerto Rico was the manner in which the ration was usually cooked. The old saying that the Lord made the food, but the devil made the cooks, was never better illustrated than during my service in Puerto Rico, where the majority of the men detailed as camp cooks were not possessed of even the most elementary knowledge of the subject. The execution of proper cooking, important everywhere, is doubly so in the tropics, where the digestive organs require every possible aid to enable them to efficiently perform their functions. If the cereals are not thoroughly cooked, the hull is not sufficiently softened and broken

up, and acts as an irritant; while the other portions are difficult of digestion in proportion as they are underdone. The fibres of meat when half burned up in hot fat, as is frequently done, are not only deficient in nutriment, but are a severe intestinal irritant and almost invariably produce diarrhoea.

The remedy for this condition is obviously the establishment of schools for the training of camp cooks, and there is no one measure that will do more to maintain the efficiency of the army in the tropics than this.

In this connection it may be added that nothing is more needed in the curriculum of the United States Military Academy than a course of training in practical hygiene and camp cooking. No officer is fit to command a company who is not scientifically familiar with these most important subjects.

If the health of an army is to be maintained the diet must be varied. To insure this, as well as a plentiful supply of fresh vegetables, permission should be given to the company commanders to draw upon the commissary for such elements as the commissary stock now supplies; or, at their discretion, and with the approval of their regimental surgeon, *cash* commutation for the entire ration, the same to be used for the purchase of vegetables and such other necessities as may be best adapted to the environment of the troops. In other words, I would make it possible to requisition the invaded country for the food required to feed the invading troops as well as for those in garrison.

Could we have had such a ration in Puerto Rico and Cuba as I have described, or if but a small percentage of the vast outlay afterward expended in the cure and treatment of the sick had been employed in procuring proper food before disease had developed, an enormous saving would have resulted, and future pension rolls would have been kept within narrower bounds.

Having already compared our ration with that of the British in India, and having shown at length its utter unsuitability for use in the tropics, let me, in closing, ask you for a moment to consider the ratio it bears to that issued to the soldiers of other nations living in temperate climates, where a larger proportion of meats—nitrogenous and fatty elements—are required than in the tropics. The American soldier gets 22 ounces of salt meat or 20 ounces of fresh meat and 58 ounces of bread and vegetables daily. The German soldier and, man for man, he is the best trained fighting machine in the world of to-day, has a daily ration of fresh meat, 5.50 ounces, or 5½ lb., 4.11 ounces, and vegetables, including bread and potatoes, 7.04. It will be observed that the German allowance is less than a quarter that of the American soldier in the tropics, while the quantity of vegetables is double.

all below the 98.4° F. line; the "slight fever," 98.4°-101° F.; the "distinct fever," 101°-104° F.; and the "marked fever," 104°-107° F. For everyday practice the zone above 107° F. may be unnamed.

This simple and well-known device has proved itself so practical and valuable after adoption in the New York Hospital at the writer's suggestion that perhaps some others may find it worthy of trial.

7 WEST FIFTEENTH STREET.

ON A POLYMORPHOUS CEREBRAL TUMOR

(ALVEOLAR GLIOMA*)

CONTAINING TUBERCLES AND TUBERCLE BACILLI*

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(Concluded from page 366.)

Conclusions.—Thus it will be seen that the tumor under discussion presents the appearance of several histological types—carcinoma, sarcoma, and glioma. The carcinomalike areas are simple alveolar and tubular. The sarcomalike areas show the structure of simple sarcoma and of endothelioma. The areas which resemble glioma show a diffuse intermingling of tumor cells with highly refractile fibres. Moreover, transitions between the different histological types are found, showing that all must be regarded as different modifications of the same kind of growth.

If now we return for a moment to a consideration of the various forms of neoplasms which are known to develop from neuroglia we shall find that only those tumors have been regarded as carcinomata which have taken origin in the adult ependymal cell. If what has gone before is borne out, it is probable that the tumor under discussion is not a carcinoma in the true sense of the term, but only another form of glioma; and since its apparent tendency is to present itself in alveolar form, it might well be designated "alveolar glioma." This name has the twofold advantage of indicating the nature and origin of the neoplasm, and at the same time distinguishing it sharply from secondary, metastatic forms of cancer. According to this conception the tumor would correspond with such a one as was proposed by Dr. Flexner¹ to arise from the adult ependymal cells.

Applying the scheme for the diagnosis of tumors suggested at the beginning of this paper we find that in this case the initial stage of tumor formation can not be followed because the growth had progressed too far. The peripheral transition from atypical to normal tissue can not be traced because of encapsulation of the

growth, and, unfortunately, the neighboring structures were not preserved. The tumor, furthermore, occurs in the brain, from which organ epithelium, in the ordinary sense, is normally absent; and it occurs in a part of the brain which has no connection with even the normal ependymal cells. This would not, however, exclude secondary growths, but such have already been excluded in this case by the findings at autopsy. The possibility of embryonic misplacement still remains.

There are few data, therefore, other than histological, upon which dependence can be placed in forming a definite diagnosis, and the latter are complex and confusing. Taking the histological type as the basis, together with what additional factors—clinical and other—may be found both for and against each growth, an attempt will be made at differentiation.

In favor of *carcinoma* are: (1) The alveolar and tubular structure of the tumor; (2) the epithelial-like type of cell, cylindrical, cuboidal, and polyedral; (3) the hyperchromatism of the nuclei; and (4) the atypical nuclear figures (Hansemann).

Against *carcinoma* are: (1) The circumscribed character of the growth; (2) its apparent encapsulation; (3) certain diffuse sarcomalike areas found in portions of the tumor; and (4) the absence of tumor formation elsewhere in the body, which can be regarded either as primary or secondary to this growth.

Added to these may be mentioned (5) the infrequency with which carcinoma of the brain, either primary or secondary, has been found.

The complete separation of the tumor from the ventricles may be said to militate against the carcinoma theory, but not entirely to exclude it, since here, as in the epithelial inclusions described by Stroebe* and others, a separation of the tumor germs may have occurred in the early embryo.

In favor of *alveolar glioma*, as of *carcinoma*, are: (1) The presence of alveoli and tubules, and (2) the epithelial-like character of the cells, which may be said to resemble choroidoid epithelium, as this is seen in preparations preserved in alcohol or allied fluids.

But an additional factor for alveolar glioma may be found in (3) the peculiar highly refractile neuroglialike fibrils scattered in places among the cells.

Opposing the theory of alveolar glioma are: (1) The absence of the typical ependymal cell characterized by its long filamentous process, and (2) the circumscribed character of the present growth, which is unlike the infiltrating nature of glioma. It is possible, however, that with more complex organization the glioma may take on new biological characteristics. (3) As a third opposing factor to alveolar glioma may be mentioned the complete separation of the tumor from the ventricle. But this, as in the case of carcinoma, would not exclude such gliomata as originate from embryonic inclusions.

* Read before the twenty-third annual meeting of the American Association of the Woman's Medical College of Pennsylvania, held May 19 and 20, 1898.

† Flexner. *Op. cit.*

* Stroebe. *Op. cit.*

In favor of *endothelioma* are: (1) The circumscribed character of the growth; (2) the absence of tumor formation in other organs of the body; (3) the arrangement about the blood-vessels in cellular cords which are themselves made up of groupings of tubules; and (4) the occasional transition from the more complex types to diffuse sarcomalike tissue. Indeed, this resolving of a complex structure into its simple constituents is more characteristic of *endothelioma* than of any other growth, and does much to render probable an ultimate diagnosis of *endothelioma*. And the arrangement in cellular cords about the blood-vessels is typically characteristic of that form of *endothelioma* known as perithelial angiosarcoma.

(5) An additional point in favor of *endothelioma* is the fact that there are no positive data to oppose such a diagnosis. For every one of the types of tumor represented in this specimen may be interpreted as a different modification of the complex endothelial growth, while the less complex tumors—carcinoma and alveolar glioma—would be less apt to assume the perivascular form.

As to histogenesis, we have seen that in this special case the initial stage of tumor formation can not be followed. Nor can a transition be shown in the periphery of the growth from atypical to normal tissue. But a consideration of the usual modes of genesis for the several types of neoplasm here represented may aid in the elucidation of this growth.

Carcinoma, as we have seen, is rare in the brain. Here, as elsewhere in the body, it is supposed to take origin from epithelial elements, whether adult or embryonic, and these elements are derived, as we know, from the ectoderm. The epithelia of the brain are the ependymal lining of the ventricles and the epithelium covering the chorioid plexuses. The so-called primary carcinoma of the brain would thus be found as a growth continuous with one or the other of these epithelial structures. Or, if due to an embryonic misplacement, the tumor might possibly be separated from the epithelium, lying deep within the medullary substance as a heteroplastic growth.

Glioma has been described as the most frequent variety of tumor found in the brain. Like carcinoma, it takes rise from cells originating in the ectodermal structures which for glioma are the several neuroglia elements.

It will thus be seen that the ependyma has been regarded as the starting point for two dissimilar neoplasms, the ordinary glioma and the carcinoma. It will therefore be of interest to inquire whether a distinction actually can be made between these two types of tumor.

That tumor having the morphological structure of carcinoma can originate in the ependyma is proved by the case of a so-called "primary carcinoma of the fourth ventricle," reported by von Wunneheim, in which he

has shown a direct connection between the ependymal epithelium and that covering the chorioid plexus on the one hand, and the epithelium of the tumor on the other. He believes that the place of transition between the ependymal epithelium and the plexus epithelium was the starting point of the tumor.

That glioma also springs from ependyma is shown by the presence of epithelial-lined cavities within certain gliomata, such as have been described by Stroebe, Buchholz, and Henneberg for the brain, and similar epithelial misplacements in the numerous cases of syringomyelia with which the literature abounds.

That ordinary carcinoma and certain forms of glioma have hitherto been confounded is now clear.

Perhaps a solution to the difficulty may be found in the theory that while both carcinoma and glioma are derived from the same blastodermic layer in the embryo, the ectoderm, they originate from this structure at different periods of its development. The carcinoma may therefore correspond with the ectodermal cell of an earlier embryonic period, while glioma would be derived from the ectodermal cell after it has become differentiated into the spongioblast of the primitive neural canal.

According to this theory the term carcinoma may be applied only to those neoplasms whose germs have originated as ectodermal inclusions in the early embryo; while such growths as originate at a later period, from the spongioblast in the embryo, or from the developed ependymal cell of the ventricles or the chorioid plexuses in the adult, must be regarded as gliomata.

Herein may perhaps lie an explanation of the infrequency with which carcinoma occurs in the brain, and the relatively greater frequency of glioma.

And, indeed, in the absence of evidence to the contrary, there is no good reason to believe that those neoplasms, already described in the literature as cerebral carcinoma, may not have been glioma of organoid type—that is, tumors which have the same ultimate histogenesis as carcinoma, but which correspond with the cell of a later developmental stage. Such a tumor would complete the scheme of classification for glioma suggested by Dr. Flexner, in which certain well-known types are referred to certain forms or stages of development of neuroglia. And as there are types whose cells correspond with the astroblast, others whose cells are like the astrocytes, and still others composed of the embryonic ependymal cell, so the tumor in question would correspond with the fully developed or adult ependymal cell. Such an organoid tumor would perhaps represent a type between carcinoma and the simple glioma.

What then is the probable nature of the tumor described? This question is not easy to answer, and different observers would doubtless be led to conclusions somewhat contrary. There would seem, however, to be more than a possibility that the tumor, primary in the

cerebral substance, sprang from adult ependymal epithelium which was included within the depth of the cerebral substance, and that the growth was entirely separated from the ventricles at the time of the autopsy.

As to the relation of the tuberculosis to the neoplasm, the former everywhere pervades the tumor as diffuse tubercle tissue or as discrete microscopical nodules. The tubercle tissue is more marked in certain areas than in others, and is most developed in the stroma and the capsule. Tubercle bacilli and typical giant cells are present.

The acute inflammatory exudate must likewise be regarded as a tuberculous product, since no other causative agent could be found.

The tumor is often broken up by the diffuse infiltration of tubercle cells and polymorphonuclear leucocytes. The tuberculosis must therefore be regarded as secondary to the tumor formation both because of the diffuse infiltrating character of the tubercle tissue and because of its limited extent.

The primary focus of the tuberculous infection is more difficult to determine. The tuberculous lesion of the brain itself was demonstrated only upon microscopical examination, so it can not be said that the primary focus did not exist elsewhere in the body. But in the absence of such evidence the brain tumor must be regarded as a *locus minoris resistentiæ* which favored the development of tubercle.

There is but little literature upon this subject. One case has been brought to my notice in which tuberculosis complicated a case of glioma. Perhaps in the future it will be shown for brain tumors, as has already been shown for neoplasms elsewhere in the body, that this association is not so uncommon.

In conclusion, I wish to thank Dr. Flexner for many valuable suggestions during the course of this work, and Mr. Brödel and Mr. Becker for kind criticism of the drawings.

A FURTHER REPORT ON THE USE OF "ANTIPTHTHISIC SERUM, T. R." (FISCHL) IN TUBERCULOSIS.

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ALTHOUGH serum therapy in tuberculosis has encountered much opposition, still a good deal of evidence in its favor has accumulated, the accuracy of which can not be questioned. And yet, even with this rapidly accumulating evidence before us, many physicians who have acquired not a little reputation in the therapy of tuberculosis emphatically condemn the treatment without having given it a personal test, or, what is worse, an honest test. Every one is, of course, entitled to a point of view, but it seems but fair in this discussion—one so pregnant with interest both to the laity and mem-

bers of our profession—that opinions should be expressed as such, and not as facts.

In the study of the therapy of tuberculosis we are, as in every other department of human endeavor, searching for truth, and the facts we desire are obtained only after careful clinical observations, carried out in accordance with recognized scientific principles. Dogmatic statements, or judgments formed prematurely, and from insufficient data, are unsafe and unworthy the argument; such it is my purpose to avoid. Obtaining what I considered good results early in my experience with the serum, I was encouraged to test it further.

My first report, published in the *Journal of the American Medical Association*, February 5, 1898, gave the result of my first three months' experience, ending December 1, 1897. I now wish to report my observations to January 1, 1899, covering a period of sixteen months.

Great latitude has been observed in classifying the types and stages of tuberculosis. I consider a definite classification important in order to avoid a misunderstanding as to the nature of the cases reported, and also to avoid unnecessary repetition of the physical signs and symptoms which otherwise would render the report unnecessarily long. Many data have been noted and could have been incorporated, but space would not permit. Hence, I have endeavored to give only such facts as will enable the reader to make his own deductions.

For convenience I have adopted the following classification: First, "pretuberculous" and early-stage cases *without* bacilli. Second, early-stage cases *with* bacilli. Third, chronic cases of long standing. Fourth, acute cases with "mixed infection."

In this connection I wish to state that each patient has been under my personal supervision. The blood and sputum have been carefully studied; the progress of each patient noted; the observed phenomena recorded, classified, and compared, and an attempt made to interpret them. The results I wish the reader to judge for himself. When possible, the tuberculin test has been applied when there was a question as to diagnosis, and at the close of treatment.

It is frequently the case that patients improve as a result of enjoying the advantages of a well conducted sanatorium. This factor should always be considered in forming final opinions of any treatment. The cases included in the report were those of my private patients. Hence, improvement emanating from an exceptionally ideal hygienic environment may be a confounding factor in this study.

The report has been prepared with a view of giving special attention to the following points: First, duration of the disease at the beginning of the serum treatment. Second, length of time spent in the sanatorium previous to beginning the serum treatment. Third, condition at beginning of treatment. Fourth, length

of time under treatment. Fifth, condition at close of treatment. Sixth, time since close of treatment. Seventh, present condition.

CLASS I. "*Pretuberculous*" and *Early-Stage Cases without Bacilli*.

The exact beginning of any case of tuberculosis is by no means easy of determination. A few observers, however, are beginning to recognize the possibility of making a diagnosis before the disease advances to the stage of expectoration. Hence, I deem it unnecessary to apologize for including such a class in my report, since it must be acknowledged that every well-developed case of tuberculosis passed through a period (however remote) in which bacilli could not be discovered. This class will therefore include cases with a strong tuberculous family history, each patient having experienced a shorter or longer period of impaired health, during which many of the important symptoms of the incipient stage have already developed, but no bacilli were found.

CASE I.—Mrs. R., aged twenty-five years; nativity, Kansas.

Family History.—Tuberculous on father's side.

Personal History.—Resident of Colorado three years. Had lost weight and strength during several months without any apparent cause. A dry cough developed, with intermittent pains in right lung. Slight hemorrhage one month before coming under observation. Sputum was also tinged with blood.

Examination, November 20, 1897.—Patient confined to room. Small area of dullness in upper lobe of right lung. Fine râles on forced inspiration. Temperature slightly elevated; pulse rapid and feeble; pain in lungs; troublesome cough; small amount of sputum, and no bacilli found.

Serum treatment instituted November 23, 1897, and continued three months. Weight at beginning of treatment, eighty-five pounds. During first month gained twelve pounds; coughed less; pain in lungs ceased; gained strength. During second and third months improvement continued; weight, one hundred pounds—a gain of fifteen pounds. General health continued to improve during several months after close of treatment, a period of nine months; no relapse.

CASE II.—Mr. B., aged sixty; nativity, Maine.

Family History.—Tuberculous. His wife also had chronic tuberculosis during several years, and died about one year previous to the first appearance of his disease.

Personal History.—Resident of Colorado nineteen years. Disease developed slowly; periodic pains in right lung experienced during a period of two or three years; no cough; marked daily fluctuation in temperature; temperature frequently subnormal. Symptoms began to increase in April, 1896. Obligated to give up work in June, 1896.

Examination, June 5, 1896.—Marked infiltration and consolidation of right lung; fine râles along lower and external border; Left lung normal. Cough troublesome; expectoration scant; no bacilli found. Temperature, 101° F.; pulse, 88.

Patient gave up work during three months; health

improved, but infiltration remained stationary. During the spring of 1897 administered serum from horse prepared by immunizing with old tuberculin; continued the use of this serum two months; considerable gain resulted; patient stronger, but consolidation continued. Improvement maintained until June, 1898, when former symptoms recurred.

Began the use of "antiphthitic serum, T. R." January 8, 1898, and continued one month. At close of treatment, dullness over right lung had greatly diminished; lung expansion increased three quarters of an inch; no râles; condition better than at any time since beginning of disease. One month later gave three tuberculin tests, one, five, and ten milligrammes, respectively; no reaction. Ten months have elapsed since close of treatment. Excellent health to date, with no tendency to relapse.

CASE III.—Mr. H., aged twenty-two years; nativity, New York.

Family History.—Tuberculous on mother's side.

Personal History.—College student. Disease developed during spring of 1897. Began with severe cold, followed by pain in lungs, cough, and expectoration; loss of weight and strength. Came to Colorado in June, 1897, on advice of his physician. Previous to coming under observation had resided in Colorado three months, with but little improvement.

Examination, August 3, 1897.—Very slight evidence of lung lesion; small area of dullness over upper lobe of left lung, with localized infiltration; a few fine râles; cough and expectoration, but no bacilli were found.

Began serum September 4, 1897; continued its use one month; patient gained three pounds; cough and expectoration ceased; no pain in lung. I advised a longer use of serum, but patient was obliged to leave Denver, but remained in Colorado. Fourteen months have elapsed since close of treatment; frequent examinations have been made and no evidence of disease found. Has been in college or otherwise employed; visited his home in New York city during the past summer; health better to-day than ever before. At present a resident of Colorado.

CASE IV.—Miss S., aged thirty-four years; nativity, New York.

Family History.—Tuberculous on mother's side.

Personal History.—Early symptoms of tuberculosis developed during spring of 1892. Came to Colorado in 1893 on advice of her physician. Experienced some gain from rest and climate, but this was soon lost and patient began rapidly to decline.

Examination, September 1, 1897.—Small area of consolidation in upper lobe of right lung; no râles; troublesome cough and sputum, but no bacilli were found. Afternoon temperature about one degree above normal; pulse between 90 and 100. Face and back covered with acne vulgaris, which had existed since puberty.

Began serum September 15, 1897; continued two months. At close of treatment cough and expectoration had ceased; no pain in lungs; temperature and pulse normal; acne completely disappeared and has not returned. Health remained good for nine months after close of treatment, when former symptoms showed evidence of returning; loss of weight and strength; troublesome cough; small amount of expectoration; pain in right lung. This condition continued several weeks before next consultation.

Examination, November 15, 1898.—Râles through-

out greater portion of right lung; marked infiltration of lower lobe; moderate fever and rapid pulse; patient very weak; cough troublesome; expectoration scant, but no bacilli found. I advised beginning serum again. Patient delayed for one month, hoping symptoms would abate. At close of a month patient was worse and came for treatment. Commenced serum again December 16, 1898; improvement began almost immediately; is now making rapid progress; all symptoms abating; treatment continued.

CASE V.—Miss J., aged twenty-two years; nativity, New York.

Family History.—Tuberculous on mother's side.

Personal History.—Present trouble began during December, 1896. Pains in left lung; cough; loss in weight and strength. Came to Colorado in August, 1897, on advice of her physician; remained in Colorado four months, with little improvement.

Examination.—Nothing abnormal detected in either lung, but patient complained of pain in lungs and suffered from irritable cough; very weak; appetite poor; temperature, 99° F.; pulse, 104.

Failing to find a sufficient cause for her condition, I advised serum, suspecting incipient tuberculosis. I regret that a tuberculin test was not made at the beginning of treatment. Began serum December 19, 1897; continued two months with marked improvement in every respect. Temperature and pulse returned to normal; cough ceased; strength increased. At close of treatment gave tuberculin test with no reaction. Patient secured employment soon after close of treatment; health has continued good. Normal weight of patient, one hundred and thirty-two pounds; on beginning treatment, one hundred and twenty-one pounds; at close of treatment, one hundred and twenty-eight pounds; present weight, one hundred and thirty-two pounds and a half.

CASE VI.—Miss R., aged nineteen years; nativity, Massachusetts.

Family History.—Pulmonary tuberculosis on mother's side. Intestinal tuberculosis on father's side.

Personal History.—Symptoms of intestinal tuberculosis appeared in 1895, which would not yield to treatment. Followed a rigid diet, with poor results. Came to Colorado in 1897; no improvement.

Examination, October 1, 1897.—Moderate tympanites; abdominal tenderness; chronic diarrhea; all foods disagreed; lungs normal; no cough or expectoration. Patient also suffered from an aggravated form of acne vulgaris, covering face and back, which had existed several years.

Commenced serum October 13, 1897; continued three months. General condition improved as treatment progressed; appetite increased; intestinal symptoms abated and finally disappeared; gained in strength; gained five pounds in weight; acne completely disappeared and has not returned. Ten months have elapsed since close of treatment and there has been no return of disease.

CASE VII.—Mr. S., aged twenty-nine years; nativity, Missouri.

Family History.—Tuberculous.

Personal History.—Artist. Contracted a severe cold in 1897, which failed to yield to treatment. Feared tuberculosis, and came to Colorado December 1, 1897.

Examination.—No distinct lung lesion found; bronchial breathing and slight increase in the vesicular mur-

mur; no râles; pain in lungs; dry cough; expectoration moderate, but no bacilli were found.

Began serum January 8, 1898; continued one month with improvement. At close of treatment gave the tuberculin test, with no reaction. Continued to improve after stopping treatment. Ten months have elapsed with no relapse.

CASE VIII.—Mr. R., aged thirty-two years; nativity, Illinois.

Family History.—Tuberculous. Father and brother died of tuberculosis.

Personal History.—Development of disease succeeded an attack of grippe; troublesome cough; aphonia; loss in weight and strength. Came to Denver in March, 1898.

Examination soon after arriving in Denver. No distinct lung lesion detected; laryngitis; aphonia; very little expectoration, and no bacilli found. Weight, one hundred and forty-six pounds. I advised a tuberculin test, and obtained a distinct reaction with five milligrammes.

Began serum March 17, 1898; treatment continued three months and a half; cough and expectoration ceased; aphonia disappeared at end of second month. At close of treatment patient felt well and strong; no relapse to date. Present weight, one hundred and sixty-two pounds.

CASE IX.—Mr. M., aged thirty-three years; nativity, Ohio.

Family History.—Distinctly tuberculous on father's side.

Personal History.—Clerk; resident of Colorado several years; had pneumonia in December, 1896; health poor since; cough and pain in lungs, with expectoration; examination revealed no distinct lung lesion. There was, however, marked rough breathing in right lung; no bacilli found. Weight reduced from one hundred and forty-five to one hundred and thirty-three pounds.

Began serum October 16, 1897; continued one month; improved; gained four pounds; felt better and stronger; continued to gain in weight and strength for several months after stopping treatment; health good to date.

CASE X.—Mrs. M., aged twenty-three years; nativity, England.

Family History.—Tuberculous on mother's side.

Personal History.—Has lived in Colorado eleven years; gives history of so-called scrofulous diathesis. Began to fail in health after her first confinement (April, 1898). Evidence of lung disease developed in September, 1898. Cough; pain in lungs; rapid pulse, and afternoon fever.

Examination, October 20, 1898.—Slight dullness and a few râles in infraclavicular region of each lung; expectoration moderate, but no bacilli were found. October 26, 26 P. M., gave one milligramme "O. T." Temperature, 98.2° F.; pulse, 92. Patient became excited and depressed; nauseated; chilly at intervals at her shoulders stiff; temperature increased one degree and pulse accelerated. Obtaining this reaction from the initial tuberculin test, I decided to begin serum. Began October 26, 1898.

Weight on beginning serum, one hundred and eleven pounds; weight six weeks later, one hundred and eighteen pounds. Has gained strength, is feeling better, cough has ceased; no sputum; pulse and temperature normal; present state of health better than for years; treatment continued.

CASE XI.—Miss H., aged twenty-three years; native, New Jersey.

Family History.—Tuberculous on mother's side.

Personal History.—Opera singer. Health good until spring of 1898; trouble began with severe cold, which left cough and persistent pain in lungs, hoarseness, and occasional aphonia. Loss in weight and strength. Came to Colorado in May, 1898; experienced very little improvement.

Examination, August 1, 1898.—Slight infiltration in lower lobe of right lung; also distinct râles heard at last part of inspiration; dullness over third intercostal space in left side and along lower border of left lung in axillary region. Râles abundant over affected regions; also tenderness on percussion. Lung expansion, two inches and a quarter; weight, one hundred and fourteen pounds; pulse: sitting, 80; standing, 98; temperature, 98.4° F.; very little expectoration, and no bacilli found. Tuberculin test not made.

Began serum September 3, 1898; continued its use four months; marked improvement; gained four pounds; lung expansion, four inches—a gain of an inch and three quarters; infiltration of right lung diminished; tenderness over left lung absent; fewer râles; voice stronger; cough less; pulse and temperature normal; treatment continued.

CASE XII.—Miss M., aged thirty-two years; native, Germany.

Family History.—Negative.

Personal History.—Journalist. Had pneumonia eleven years ago; previous health excellent; cough and pleural adhesions supervened; has been in United States greater part of the time during ten years; cough and pleurisy pains continued; spent one year in Dr. Loomis's sanitarium. Cough continued until she came to Colorado in 1893; since then it has been less, and absent much of the time; no pain in lungs since coming to Colorado.

During the past year health has been gradually failing. In December, 1897, cough ceased and lung affection had apparently disappeared. Soon after the lung symptoms disappeared bowel symptoms appeared and rapidly became worse. In May, 1898, operation performed for appendicitis; slow recovery; health failed rapidly after operation; weight reduced from one hundred and forty-eight to ninety-eight pounds.

Patient experienced periodic attacks of dysentery, with tenesmus, general abdominal tenderness, and tympanites at intervals of ten days or two weeks. These attacks usually continued three days, and were frequently preceded with slight chills. This condition had existed several months, recent attacks increasing in severity.

Patient consulted me early in October, 1898, and remained under my observation several weeks, during which time I was unable to find a definite cause for her condition. Her principal trouble seemed to be intestinal. Temperature never far from normal, and frequently subnormal. Pulse about 90 and weak; no cough or expectoration; no pain in lungs; no leucocytosis. October 27, 1898, the urine and feces were examined for tubercle bacilli with negative results; examination of lungs also negative. Notwithstanding these negative results I suspected concealed foci of tuberculous infection and advised a diagnostic test of tuberculin, but patient objected. I saw the patient frequently and examined her lungs again November 9, and detected râles in apex of each lung. I again advised tu-

berculin test, and patient consented. On November 9, 11.45 A. M., the initial dose of one milligramme "O. T." was administered. Temperature, 98.4° F.; pulse, 84; respiration, 28. The injection was followed by a pronounced reaction. During the afternoon patient was nervous and experienced tingling sensation in limbs; cough commenced; headache, backache, and profuse perspiration during the night.

Next day, November 10, 1.45 P. M., temperature, 101° F.; pulse, 106; respiration, 35. I considered this reaction, following the minimum dose of tuberculin, sufficient to confirm my diagnosis of tuberculosis. On the following day commenced administering "antiphthitic serum, T. R." This treatment has been continued with the following results: The bowel trouble has gradually improved; less tympanites; less pain in bowels; appetite better; sleeps much better; less headache; patient in every respect feels better and is gradually improving. There has been no cough or expectoration at any time since beginning the serum.

It should be noted that I have been unable at any time to discover bacilli. Notwithstanding this fact, the patient responded to a marked degree to the tuberculin test and is making unmistakable improvement under the serum. Treatment continued.

It is generally thought that a condition of lowered vitality or diminished resisting power of the patient exists previous to the actual recognition of tuberculosis. Furthermore, it is conceded that injured, weak, or feeble tissues furnish a favorable seat for the primary tuberculous lesion. It is also well known that many other diseases fertilize the soil for the development of tuberculosis. Notwithstanding these facts, statements are frequently made which cast doubt upon the idea of a "pretuberculous state," or a "tuberculous predisposition."

By using the term "tuberculous predisposition" it is not intended to convey the impression that bacilli are present, or that foci of infection have already been established. There may, however, be lesions in the form of abrasions of the bronchial, laryngeal, or intestinal mucous membrane which serve as fertile culture media should bacilli come in contact with them; should this occur, rapid development of tuberculous lesions would soon follow.

My meaning is that there is a well-defined lowered resisting power of the organism which exists before tubercle bacilli can gain a lodging in the tissues. Such a state, however, need not necessarily terminate in tuberculosis, but the patient may succumb to other infectious diseases.

It should be observed that in each of the foregoing cases there was a strong tuberculous family history. Each patient had developed many of the symptoms of incipient tuberculosis and had been in a state of impaired health a considerable time. And, furthermore, the majority of the patients in this class had been in Colorado a sufficient time to test the climate, with little or no improvement. And, finally, the serum treatment was used unaided by other therapeutics, with the uniform

results reported—namely, the condition existing before beginning the serum was corrected, and, with but one exception (Case IV), they have remained in good health to date.

Having my experience with the serum before me, I am more than ever strengthened in my belief in the "pretuberculous state," and this state is accompanied by a deficiency in the antitoxic generating power of the blood and tissue cells. And, furthermore, that the "antiphthisis serum, T. R.," administered at this time, supplies the deficiency and enables the organism to regain its normal power. It is, however, of little importance by what name this state or condition is called. The important fact remains that a subnormal condition exists for a shorter or longer period previous to actual tuberculous infection. I believe, therefore, that the time is near at hand when prophylaxis will be considered of as great importance as therapy. It is for the purpose of emphasizing this point that I include the foregoing cases in my report.

(To be concluded.)

BATHING A REGIMENT.

By H. M. COHEN, M. D.,
ACTING ASSISTANT SURGEON, U. S. ARMY.

THE maintenance of the health of troops in the field has for many centuries put to the test the ingenuity of the ablest medical and military minds.

There is nothing that so much demoralizes a command as sickness. Often defeat in battle will be taken as a matter of course and stimulate the men to greater enthusiasm for further conflict. But once let a body of troops be attacked by disease, and even the strictest military discipline will not avail to prevent the command from undergoing rapid demoralization. It is said of Napoleon that before the battle of Waterloo he called a council of his medical advisers to learn the number of men unfit for duty. When he was informed that there were many who had been wounded in battle, he replied: "I care not for them, they have done their duty. What of the sick?"

Lord Nelson is given credit for the remark that "a sick sailor is worse than a dead sailor; for a dead one we bury and that is the end of him, but the sick one fears death and retards our progress."

Every known means has been resorted to in an effort to keep troops in a good healthy condition. At a regular permanent post, where barracks are furnished and all modern means are at hand, this is not such a difficult matter. But with troops in the field it is quite different.

Where a command is expecting to be ordered away at almost any moment, things of necessity are of a transient character, and must needs be incomplete.

Then, again, it is much easier to keep a few hundred men healthy, as at a regular post, than an entire division

or army corps in one large camp. It is therefore a commander's greatest object to keep all the men under him in as healthy a condition as possible, and to that end experience has taught every one that cleanliness is the greatest possible factor.

When a camp is about to be selected, the first consideration is that of the water supply. Experience has taught the army that there should be not only a plentiful supply of good, pure water for drinking purposes, but a sufficient quantity for bathing purposes. To this end, in camps of instruction, a system of water pipes is laid over the entire camp, thus making the obtaining of water an easy matter and the water accessible to all.

But, even with a very abundant supply of good water, it is very difficult to get the men to bathe thoroughly. This is not so much due to any inclination they may have toward uncleanness, as it is to the lack of proper facilities. Where the camp is near a stream, in the summer season all the men are only too glad of the opportunity to take a swim; and, realizing the good derived from this practice, the company commanders march their commands in a body to the river for that purpose. But in the cold seasons of the year this is impossible, and then it is that the men will habitually shirk the use of water for bathing purposes, and it is a most difficult matter to get them to observe proper cleanliness.

With this fact in view, various means and devices have been resorted to. One regiment at Camp Meade carried with it a number of tubs, all of different sizes, so that when a change was made they could be easily moved. These were used every day by a different company. By this method the difficulty was partially overcome, but it was far from satisfactory. In some regiments a tent was set aside for bathing purposes. It was the ordinary hospital tent and was heated by oil stoves. In this tent there would be several tubs, and each man desiring a bath would carry his own water. This was very unsatisfactory also. Various similar means were used, but with like results.

But at last a way has been found that makes bathing not only easy but an actual pleasure. For this, credit is due Major Edwin Field, the senior surgeon of the Fourth New Jersey Volunteer Infantry. The arrangements are somewhat as follows: A frame one-story shack is constructed that will accommodate about twenty men at one time. This place is divided by a partition into two rooms, so that one can be used for dressing purposes. At different places in the ceiling project pipes which scatter the water in all directions, thus making the shower bath. By means of a simple valvular arrangement the temperature of the water is easily regulated from hot to cold. The rooms are kept comfortable by an ordinary Sibley stove in the dressing room.

Outside of the shack is the furnace. This is a very simple arrangement and keeps the water at the proper temperature. It is constructed of brick, very much in

the shape of a bake-oven. Instead of a grate there are several coils of pipe through which the water passes, and is thus kept constantly warm.

The cold water comes through a different pipe which can be admitted into the main channel as needed. Thus, in the simplest way the water is kept at the proper temperature.

Two men are detailed to look after the arrangements and keep the furnace in good working order. Certain days are set apart for the different parts of the regiment. Each battalion uses the bath two days a week, thus taking six days. Sunday and three nights are set aside for the use of the officers.

Although these rules govern the outfit, the men can bathe two and three times in the week, and the great majority of them do. They invariably refer to the bath with the greatest enthusiasm, and they will tell you that it is the pleasantest function of the army routine.

To make sure that all men of the command get the benefit of at least one good bath a week, a registry is kept, and every man is required to have one to his credit when the week ends.

The actual cost of the whole outfit is comparatively small, the entire amount being less than two hundred dollars.

I have no doubt that the remarkably good health of this regiment is in a great measure due entirely to this one bath house.

The experiment has been closely observed and has received the hearty approval of all.

THE TREATMENT OF CHRONIC ULCERS OF THE LEG.

By JOHN B. CORSIGLIA, M. D.

IT is a mistake to imagine that in order to be a good surgeon one must necessarily be provided with the endless variety of instruments to be seen in the instrument-maker's window, or that in order to apply a truly antiseptic dressing one must have mastered the interminable list of chemical substances that are more or less endowed with germicidal properties. This sort of surgery can be practised only by a very few fortunate persons, and, if it were necessary, we should be obliged to consider the practitioners in the country and small towns, who by much simpler means obtain such frequent and remarkable results, as common bone-setters. Although in some cases it may be desirable to modify and perfect one's instruments, it is true that simplicity is the aim to be attained in surgery, and that great merit consists in knowing how to derive the greatest amount of benefit from the elementary means which one can easily manage.

From my personal experience, I have come to the conclusion that this is especially true in the treatment

of chronic ulcers of the leg. The chronic-ulcer patient is like the unfortunate sufferer from chronic specific urethritis. If he is a well-to-do man he is forever hunting up specialists. If he is poor, there are no hospitals or dispensaries in the city which he has not visited; and the consequences are that such a patient frequently carries his troubles to the grave. But if, after a great deal of persuasion on some physician's part, he is finally convinced that his trouble is not a mere *bagatelle*, that a speedy cure can not be effected, and that he is doing himself wrong by drifting from one doctor to another, he very soon regrets that he did not follow this advice before.

And while I do not wish to bring criticism upon my colleagues, yet I must say that I have observed so many forms of ointments, such promiscuity of treatment adopted in chronic ulcers of the leg that, although the lack of the patient's confidence in his physician has a great deal to do in increasing his misery, yet I firmly believe that often if simpler treatment were adopted in these cases the quicker and better would be the results.

Let us take, for instance, a chronic ulcer situated below the middle of the leg. I first scrub the leg and ulcer with soap and water, and dry thoroughly. No matter what kind of an ulcer it is, my next aim is to reduce it to a simple ulcer. This is done by curetting; and, as this is quite a painful procedure, I inject two or three drops of a four-per-cent. solution of cocaine in the vicinity of the ulcer. The best mode of using cocaine hypodermically is to put the needle in superficially and horizontally as far as it will go. After two or three minutes, during which anesthesia appears, I inject two or three drops more with deep punctures. If much bleeding results on curetting, I dip a sponge in a two-per-cent. solution of carbolic acid and compress for five or ten minutes. If at the end of this time bleeding continues, I leave on a wet dressing of said solution for twenty-four hours. My next aim is to get the ulcer dry, and to dress it dry. I have obtained the quickest results by brushing the ulcer with pure carbolic acid, and then touching this with a little cotton dipped in alcohol. Alcohol has the power of absorbing carbolic acid, and so lessens the action of this drug. If at the end of two days I still find any oozing, I again brush with pure carbolic acid. In regard to the bandage, I begin at the toes and extend up as far as the knee. And let me say just here that a properly applied bandage is of the utmost importance in these cases. When the ulcer is perfectly dry, I apply small pieces of adhesive plaster heated over an alcohol lamp, one piece overlapping the other, and allowing a small space between for any discharge which might take place. After a few days, if no exudation is seen on the dressing, and there is no displacement, I leave it on for a week or two. Of course, each case is a law in itself. But, no matter how old the ulcer may be, I have as yet to see the one which would not yield to this treatment. In varicose ulcers,

where the ulcer is surrounded by a thick ring of tissue, I make radiating incisions. By so doing, you start the circulation toward the dead part, and so give the ulcer a chance to heal. In these cases also, and where extensive œdema is present, the bandage should be pretty tight; if cellulitis complicates these cases, I order an elastic bandage.

Practitioners will find the utmost difficulty in obtaining any history in many cases. But I have laid down this rule: An ulcer situated above the middle of the leg is syphilitic, regardless of history. I make it a rule to examine the heart, lungs, and kidneys in all cases, as disease of any of these organs would interfere in the local treatment. For instance, if the heart is diseased, passive congestion and œdema of the lower extremities are of frequent occurrence. Proper attention, then, to this organ, when compensation is possible, will greatly facilitate you in getting rid of the ulcer. But simplicity, cleanliness, and the proper time of interference are the sheet anchor in all cases. And as to drugs, I have as yet to find the one which will equal pure carbolic acid.

50 CENTRE STREET.

GONORRHOÆAL VAGINITIS AND ITS TREATMENT.

By HARRY GREENBERG, M.D.,

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GONORRHOÆAL infection, as an ætiological factor of most pelvic troubles, is now well recognized by men of large experience, and even the most conservative admit of its frequent relationship. Therefore, the proper treatment at its onset, and the prevention from its attacking neighboring organs, I consider better surgery than the skillful removal of pelvic organs, with its accompanying large fee and great glory.

That gonorrhœa in women is at present improperly treated, one has but to attend large gynecological clinics and witness the wholesale mutilations of the pelvis in so many women, to be convinced.

The natural sequence of gonorrhœal vaginitis not treated or improperly treated is but its gradual extension, following the mucous tract, from vagina to cervical canal, to uterine canal, Fallopian tubes, ovaries, and peritoneum.

The gonococci, unlike other pyogenic organisms, do not penetrate the muscular wall, but follow along the mucous canal, and are therefore not so immediately dangerous to life as the staphylococci or other pus-producing bacilli.

The cause of gonorrhœa is contact with gonorrhœal pus, whether it is by coitus or indirectly by means of rags, etc., saturated with gonorrhœal pus, or, in a child, by sleeping with an uncleanly gonorrhœal mother, whose

discharge is carelessly allowed to come into contact with the vulva of the child.

The diagnosis offers no difficulties. A woman, having been previously well, who, shortly after marriage or indulgence with her lover, begins to feel pain in her pelvis, with burning and frequent micturition and a discharge of a thick, yellowish matter, with painful, profuse, and irregular menstruation, has a typical case of gonorrhœa. On inspection the parts look red, inflamed, and covered with a thick, tenacious, mucopurulent discharge, and the urethral orifice looks red and eroded. On introducing the index finger into the vagina up to the neck of the bladder and carefully withdrawing it, causing a continuous pressure on the anterior vaginal wall along the course of the urethra, a drop or more of pus will ooze out from it. Speculum examination will show that the cervical os, on first inspection, is thickly covered with a stringy and tenacious pus which can be removed only with difficulty. The odor of the gonorrhœal discharge is also peculiar to itself, and once encountered is always remembered if one is endowed at all with sensitive olfactory filaments. Such typical cases we do not, however, always meet with, and fortune usually smiles on the beginner, or the inexperienced, by sending him the atypical, or the subacute and chronic, with leucorrhœa, menorrhagia, and dysmenorrhœa as symptoms complained of, with painless urination and no history of exposure to infection. With the squeezing out of a drop or more of pus from the urethra, the stringy, tenacious, and purulent character of the discharge, and the microscope, a definite diagnosis can and should be made in the interest of humanity and the preservation of the organs of the female pelvis.

Once diagnosticated, the enemy should be located and attacked. There should be no leniency, no work on suppositions. Gonorrhœa is a local disease, and the tissues attacked are those that suffer, and whatever constitutional symptoms may then exist are due to reflex action caused by the saturation of the terminal nerve fibres with gonorrhœal pus.

To cure gonorrhœa the gonococci should be killed locally. Constitutional remedies have no effect, except as a palliative, to whatever reflex disturbances there may then exist. To cure the disease means also to prevent its spreading, in which the great danger lies.

The enemy on the open—that is, the gonococci in the vagina—may be conquered with effective weapons. Once they are entrenched and barricaded in the uterine canal, with a fertile soil to thrive on and monthly harvestings, which menstruation affords, our power of attack becomes limited or null. The further extension of the disease into the unprotected tubes is now left unhindered, and results in pyosalpinx. If the oviducal mouths become occluded by inflammatory exudates, sterility, with its accompanying dysmenorrhœa, menorrhagia, etc., is the result. If they remain open, pus enters the peritoneal cavity and produces local peritonitis. Marriages are

universally the result if impregnation takes place; the ovum can not successfully thrive on a diseased endometrium, or it is directly attacked by the gonococci and killed.

Over two hundred cases of gonorrhœal vaginitis, the complete records of which are now in my possession, have led me to regard the disease with the utmost respect, and not to think lightly of it until wholly conquered. But, thanks to vigorous treatment, together with the aid of the patient, whose confidence and intelligent understanding of her ailment are so essential to success, much can be accomplished in completely curing the disease.

Rest in bed I consider indispensable in an acute attack, and almost always insist upon it. The diet should be light, and alcohol in any form strictly forbidden. Purity of thought should be enjoined. Allow nothing which will directly or indirectly tend to irritate the parts affected.

Cleanliness is next in importance, as it affords greater resistance to the tissues attacked and prevents the invaders from accumulating and multiplying. Keep them reduced in number. Sitz baths of warm water with sodium bicarbonate, twice daily, and with two hourly douches of sodium-bicarbonate solution, a gallon each time, will answer the purpose effectively.

The sodium bicarbonate acts as a sedative rather than as a germicide. To kill the gonococci, once a day, after the morning sitz bath and douche, the vagina should be thoroughly scrubbed by the physician, with soap and water and a soft nailbrush. A speculum should be introduced and the tenacious and sticky pus from the cervix mechanically removed; the folds of the vagina should now be put on the stretch by the gradual withdrawal of the bivalve speculum and a 1-to-1,000 bichloride solution, or, better still, five-per-cent. pyocetanin (methylene blue) thoroughly applied by means of cotton on an applicator.

What I particularly wish to emphasize is the necessity of stretching the vaginal folds to apply the germicidal solution, also the frequent use of the douche and the quantity of water employed. A gallon every two hours I do not consider too frequent or too much.

545 EAST WATER STREET.

REPORT OF A CASE OF ACCIDENTAL SWALLOWING OF A BRASS WIRE, AND ITS SPONTANEOUS ESCAPE FROM THE STOMACH BY WAY OF THE NINTH INTERCOSTAL SPACE.

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On the 10th of September, 1898, Dr. C. A. S., while swallowing his throat with a prolapsed end of brass wire, No. 2, six inches in length, the end of which was wrapped with cotton, accidentally allowed it to slip

out of his fingers, when it passed down the œsophagus beyond his reach.

An hour later Dr. G. F. Suker saw the patient, and upon examination could feel the upper end of the probang in the region of the cricoid cartilage, but failed to remove it, as it seemed imbedded in the anterior wall of the œsophagus.

I saw the patient soon after, but advised that nothing be done unless the wire gave trouble. I could at this time find no evidence of its presence in the œsophagus. The patient suffered not the slightest discomfort, and did not for nearly three months, when he began to have distress in the epigastrium. On the 9th of January, 1899, he experienced a good deal of sharp pain in the region of the cardiac end of the stomach, and the next day the end of the probang was found protruding under the skin in the ninth intercostal space near the costal cartilages.

He was admitted to Robinwood Hospital on January 11th, and on the 12th a four-per-cent. solution of cocaine was injected around the point of presentation, and a small incision of the skin was made, when the end of the wire was readily grasped with a forceps and the wire removed.

The patient remained in the hospital a few days, suffering not the slightest annoyance from the small operation performed, when he was discharged.

A number of cases have been reported of the escape of foreign bodies from the stomach through the abdominal wall, but I am not aware that any have been heretofore reported where the foreign body escaped by way of the thoracic wall.

705 MADISON STREET.

Therapeutical Notes.

Ryerson's Cleansing Solution for the Nasal Passages.—Dr. G. Sterling Ryerson, of Toronto (*Canadian Practitioner and Review*, February), devised the following solution in 1884, and has used it ever since with satisfactory results:

R Sodium bicarbonate,	} each.... 30 grains;
Sodium baborate,	
Sodium chloride,	
Sodium salicylate.....	
Oil of bergamot.....	40 "
Listerine.....	3 minims;
Glycerin.....	½ ounce;
Distilled water, enough to make.	1 "
	8 ounces.

M.

Pastilles for Fœtor of the Breath.—This formula is given in the *Journal de médecine de Paris* for January 15th:

R Powdered coffee.....	45 parts;
Vegetable charcoal,.....	} each..... 15 "
Powdered sugar,.....	
Vanilla,.....	
Mucilage of gum arabic.....	a sufficiency.

M. Divide into pastilles of fifteen grains each. Five or six to be chewed daily.

Picric Acid in the Treatment of Gonorrhœa.—Antonelli and Scatolari (cited in the *Klinisch-therapeutische Wochenschrift* for February 26th) inject

three times a day, in cases of acute gonorrhœa, about a pint of a filtered two- to five-per-cent. solution of picric acid, with the reservoir elevated from three to five feet above the urethra. These irrigations are said to be very soothing, and often to effect a cure in two weeks.

A Formula for Iron and Cinchona.—The *Gazette hebdomadaire de médecine et de chirurgie*, February 26th, citing *Nouveaux remèdes*, attributes to Dr. Patier the following formula based upon the solubility of tannate of iron in glycerin:

- R Tartrate of iron and potassium 150 grains;
 Extract of cinchona 150 "
 Glycerin 300 "
 Distilled water 150 "
 Madeira wine, enough to make one quart.

The Treatment of Exophthalmic Goitre.—The *Riforma medica* for February 10th attributes the following to Kant:

- R Sulphate of duboisine $1\frac{1}{3}$ grain;
 Water 75 minims.

M.

To be taken two or three times a day.

Compound Iodoform Powder for the Dressing of Uterine Ulcers.—The *Gazette hebdomadaire de médecine et de chirurgie* for February 19th gives the following:

- R Finely sifted iodoform,
 Powdered cinchona,
 Powdered benzoin,
 Powdered carbonate of } of each, equal parts.
 magnesium saturated
 with essence of eu-
 calyptus. }

M.

For Laryngeal Inhalation.—According to the *Gazette hebdomadaire de médecine et de chirurgie* for February 19th, Didsbury is responsible for the following:

- R Tincture of benzoïn 60 grains;
 Tincture of eucalyptus 60 "
 Tincture of soapwort 90 "
 Cherry-laurel water 150 "
 Distilled water 3,750 "

M.

Two inhalations of five minutes each daily.

The Treatment of Tubercular Cystitis.—The *Clinica moderna* for February 8th gives the following:

In the first stage—viz., before surgical intervention is called for—it is requisite to combat the purulence of the urine and the pain. To that end one of the following formulae may be used:

- R Sulphate of codéine $4\frac{1}{2}$ grains;
 Salol 90 "

Divide into twenty powders.

Sig.: One powder to be taken after each meal.

Or,

- R Hydrochloride of cocaine,
 Extract of cannabis in } of each, 43 grains.
 dia,
 Carbonate of guaiacol 30 "

M.

Make twenty pills. One pill to be taken after every meal.

Against fermentation of the urine urotropin may be

given in a dose of four grains and a half four times a day.

Creosote in Constipation.—The *Medical Review of Reviews* for February 25th, citing the *West London Medical Journal* for October, says that creosote may be administered in drop doses, twice daily, after breakfast and dinner, for constipation. It should not be prescribed in capsules or pearls, but should be taken in milk, beer, wine, etc. After a few days the dose should be gradually increased to seven minims twice daily.

For Acute Otitis.—The *Gazzetta degli ospedali e delle cliniche* for February 14th recommends:

- R Ichthyol 15 grains;
 Glycerin, } of each $112\frac{1}{2}$ "
 Distilled water, }

M.

A few drops of this mixture to be dropped three times daily into the ear.

The Treatment of Eczema of the Hands.—The *Gazzetta degli ospedali e delle cliniche* for February 14th gives the following formula:

- R Pure iodine $1\frac{1}{2}$ grains;
 Iodide of potassium $3\frac{3}{4}$ "
 Glycerin 150 "

M.

To be applied in the evening, and in severe cases twice daily also.

Ichthyol in the Treatment of Fissure of the Anus.—The *Gazzetta degli ospedali e delle cliniche*, for February 7th cites Van der Willigen and Conitzer (*Münchener medicinische Wochenschrift*, 1899, No. 3) as having used ichthyol successfully in the treatment of rhagades of the anus. It is applied pure. At first it is well to anesthetize the part with cocaine, but subsequently there is little or no need of this.

Oily Collyria.—At a recent meeting of the Paris Academy of Medicine (*Progress médical*, January 28th) M. Sorini insisted on the advantages of oil as a solvent of alkaloids for ophthalmic use. Oily solutions, he said, were better borne and more efficient than aqueous collyria.

Resorcin in the Treatment of Granular Pharyngitis.—Lyon (cited in the *Gazzetta degli ospedali e delle cliniche* for February 9th) employs the following gargle in the acute stage:

- R Resorcin 4 parts,
 Glycerin 15 "
 Distilled water 150 "

M.

A Topical Application for Acute Articular Rheumatism.—The *Revue médicale* for January 31st gives the following formula:

- R Extract of hyoscyamus 5 parts,
 Iodoform 10 "
 Sodium salicylate 30 "
 Vasoline 100 "

M.

Orexine in the Vomiting of Pregnancy.—Hermann, impelled to the trial by Frommel and Rich's reported results (*Pharmaceutisch Mittheilungen*, January, *Presse médicale*, February 11), has used orexine in these cases, successfully in every instance. Dose, four grains two or three times a day.

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PROFESSOR OSLER ON TYPHOID FEVER IN THE
UNITED STATES.

PROFESSOR WILLIAM OSLER, of Baltimore, a man who never speaks or puts pen to paper without communicating ideas of weight in words of beauty, recently delivered before the Medical Society of the State of New York an address entitled *The Problem of Typhoid Fever in the United States*. The address has appeared in the *Medical News* and, we think, in some other journals, so it will be read by many medical men. Nevertheless, Dr. Osler has added to his numerous benefactions to the American people by having it printed also in the form of a very attractive pamphlet.*

The address reminds us, in the first place, of some things we are too apt to forget—the brilliant labors of Nathan Smith in the study and portrayal of typhoid fever in the early part of the century, and those of Elisha Bartlett, James Jackson, Jr., W. W. Gerhard, George C. Shattuck, Alfred Stillé, and Austin Flint, in this country, and Sir William Jenner, in England, at subsequent periods. Speaking of Nathan Smith's *Practical Essay on Typhous Fever*, published in 1824, Dr. Osler says he re-reads it at intervals, each time with increasing respect for the author's sagacity. "There is," says Dr. Osler, "more strong, sane sense in his booklet of 85 pages than in anything that had appeared on 'the slow nervous fever' sincefluxham. It is most refreshing to turn from contemporary treatises on fever in English, French, and German to this clinical masterpiece. Happy the patients who fell into the hands of the old founder of Dartmouth Medical School and the first professor of medicine at Yale! With but little modification his section on treatment might be transferred to one of our year-books as the freshest and the best."

The American medical profession may justly look back with pride to the pioneer work it did in elucidating the subject of typhoid fever, but another picture, one by no means so pleasant to contemplate, is shown further on in Dr. Osler's address—that, namely, of the almost complete disregard shown by the American people in their collective capacity of the labors of American

physicians of our own times to stamp out the disease by cleansing the soil and purifying the drinking-water. Our shameful hygienic shortcomings are eloquently shown up in Dr. Osler's address, and we hope that his appeal will not fall on barren ground.

THE BEGINNING OF THE END FOR DIPLOMA MILLS
IN ILLINOIS.

IN our issue for February 18th we published the substance of senate bill No. 172, introduced by Mr. Chapman on February 2d, designed to put a stop to the career of diploma mills in the State of Illinois. It was in the form of an amendment to the law of April 18, 1872, concerning corporations. The bill was referred to the committee on judiciary. We now learn that on the 15th of March that committee recommended the passage of the bill with some minor amendments. It is generally known as the State board of health bill, and its purpose is to confer on the secretary of State power to revoke the charters of institutions granting degrees in medicine, pharmacy, or dentistry, on presentation to him by the State board of health, the State board of pharmacy, or the State board of dental examiners of proof that such institutions are conducting a fraudulent business. Among the changes proposed, we understand, is that of vesting the licensing power in the attorney general instead of in any of the boards mentioned.

So far as we are informed, the State board of health does not object to this change, and it is confidently expected that the bill, if it becomes a law, will put a stop to the diploma mills. So high an officer as the attorney general may, it is assumed, always be depended upon to do his duty in the interest of the community. The Illinois profession seems to feel this confidence, and we have no doubt it is justified. Incidentally, we take pleasure in recording the fact that the charter of the Independent Medical College, of Chicago, has been revoked by a court. A motion for a new trial and one for arrest of judgment were overruled, but an appeal to the supreme court was allowed.

CASE OF RUPTURE OF THE BLADDER WITH
SPONTANEOUS CURE.

DR. DRAPPIER records in the *Journal des sciences médicales de Lille* for December 10th a case which strikes us as being sufficiently extraordinary to deserve special mention. A laborer leading his horses to water was mounted on one of them, when suddenly the horse shied and threw him down among the others. He was trampled upon and received, among other injuries, a violent contusion in the hypogastric region. Before

* Loaned by the John Murphy Company, Baltimore.

mounting he had felt a great desire to urinate, for he had been drinking somewhat, but he had not complied with the desire. When Dr. Drappier saw him, an hour later, the hypogastric region was exquisitely tender and slightly swollen, but from pubes to umbilicus in place of dullness there was marked resonance. A little blood trickled from the meatus urinarius, and an elongated clot of about the calibre of the urethra was passed after violent efforts made by the patient to urinate. The vesical tenesmus persisted after the passage of the clot, and, notwithstanding that it was many hours since the patient had urinated, no urine escaped. A flexible catheter was then introduced into the bladder, but failed to withdraw any urine; so a three-per-cent. solution of boric acid was injected in small quantities until about a pint had been passed in. None of it returned. Dr. Drappier summoned his colleague with a view to deciding what operative intervention was requisite, and meanwhile applied opiated poultices to the hypogastrium. In about half an hour the pains were greatly lessened, and on the arrival of assistance the patient was sleeping quietly. When he awoke the abdomen was less tender, and he passed a small quantity of sanguinolent urine. It was decided, therefore, to await results, and the patient was told to urinate if possible every two hours, since he objected to a catheter being tied in, and was given thirty grains of salol. Six or seven hours later he was sitting up, urinated without difficulty, the pain was bearable, the general condition good, and the pulse normal, while the swelling had disappeared. Milk diet was given, and a drachm of salol was administered daily. In two days the patient was able to walk a little, and in five days he was discharged cured.

The questions for consideration are as to the fact of a rupture of the bladder, its extent and seat, and the method of cure. The emptiness of the bladder on catheterism, seeing that the man had not micturated for many hours, tends to establish the fact of a rupture. That the failure to obtain urine was not due to the catheter's not reaching the bladder is proved by the subsequent introduction of a pint of boric solution, not a drop of which returned. Further confirmation is found in the tenesmus, the disappearance of the vesical dullness, and the presence of blood in the urine.

As to the seat of the rupture, doubtless careful exploration with the metallic sound, combined with hypogastric palpation and rectal examination, would have demonstrated this. But in view of the rapid amelioration such interference would have been indefensible. For various reasons, however, it would appear that the rupture was in the posterior superior portion of the bladder: 1. The absence of puffiness in the hypogastric

region, which would have existed had the rupture been anterior. 2. The patient's position in the dorsal decubitus would surely have left some of the boric solution in the bladder had the rupture been anywhere but in the most dependent portion of that viscus. 3. The anatomical structure of the bladder, the muscular fibres being less numerous and less thick in the upper part, thus rendering that the point of least resistance. Further, had the injury been in the lower part, the bladder would surely have emptied itself by degrees to some extent as the urine trickled down from the ureters.

The extent of the wound must be supposed to have been small, and, as the bladder was distended at the time of the accident, it probably emptied itself abruptly into the peritoneal cavity. Then the walls retracting, the edges of the wound fell into contact and, no further distention taking place, finally united.

The most noteworthy point is the absence of peritoneal infection. The experiments of Tuffier, who asserts that he has demonstrated the innocuousness of aseptic urine to the peritoneum and its rapid absorption by that membrane, would seem to receive additional confirmation from this case. In his opinion, it is not the urine itself, but its continued effusion, which is ordinarily the cause of peritonitis. The boric injections doubtless helped to render the urine innocuous in this remarkable case.

THE ANOMALIES IN BRITISH MEDICAL DEGREES: A CORRECTION CORRECTED.

The Journal of the American Medical Association for March 18th, replying to our comments on this subject in our issue for March 11th, takes exception on two points, accepting our correction, but adding that "the critic is also slightly incorrect." It is in no spirit of captiousness that we reply, but because we think that possibly some interest attaches, even on this side of the water, to the multifarious array of letters which the many English-qualified practitioners in this country are entitled to place after their names in addition to, or substitution for, the simple M.D. *The Journal* says: "There is an L.R.C.S. degree, etc." We did not dispute that fact, save in the case of the College of Surgeons of England, which does not grant a license, its membership being practically, though not theoretically, equivalent thereto. The L.R.C.S. is granted by the Colleges of Surgeons of Edinburgh and Ireland, while the Faculty of Physicians and Surgeons of Glasgow confers a license, abbreviated L.F.P.S. Glasg. None of these three colleges, however, grants a membership. Neither did we deny that the Colleges of Physicians of Edinburgh and Ireland, as well as that of London, grant a membership, though the Faculty of Physicians and Surgeons of Glasgow does not. We were speaking of surgical colleges when we stated that while the L.R.C.S. does correspond in surgery to the F.R.C.P. in medicine, "the English College of Surgeons had no" (surgical) "equivalent for the lower grade" (in medicine) "of L.R.C.P., while the Scotch and Irish colleges"

(of surgeons) "have no" (surgical) "equivalent for the intermediate grade" (in medicine) "of M. R. C. P." The insertion of the words here bracketed would, perhaps, have made our meaning clearer, though we think that the sense of the passage should be perfectly plain to a careful reader as it stood. The Royal College of Physicians of Ireland was formerly called the King's and Queen's College of Physicians, whence, in place of the present L. R. C. P. I., etc., there formerly existed the fearsome qualifications of L. (or M. or F.) K. Q. C. P. I. The qualifications of the Faculty of Physicians and Surgeons of Glasgow are L. F. P. S. Glasg. and F. F. P. S. Glasg. Licenses, memberships, and fellowships of colleges are not "degrees" from an English point of view, for such can only be conferred by universities. The case of the "Lambeth degrees" granted by the Archbishop of Canterbury does not affect this statement, since they are a remnant of the primate's pre-reformation office of legate from the Holy See, carrying jurisdiction over the universities, which were at that time ecclesiastical institutions. This is shown by the fact that the recipients of those degrees, which are granted in several faculties besides medicine, though in the latter instance only to legally qualified practitioners, are entitled to wear the academical costume of the corresponding degree in the university from which the primate granting it himself graduated, practically always either Oxford or Cambridge.

A RARE CAUSE OF SATURNISM IN INFANTS.

ROUSSEL (*Loire médicale; Gazzetta medica lombarda*, February 15th), in his clinic at the Hôpital St.-Étienne, observed quite a number of infants suffering from constipation, colic, and vomiting, the cause of which symptoms he was unable to fathom until he observed that the mothers were suffering from cracked nipples. Inquiry elicited the fact that an "application for sore nipples" was being used for the fissures, which, upon examination, proved to consist of a lead base. Although in the absence of teeth the gums did not show the slate-colored line of Burton, nor the inner surface of the cheeks the slate-colored patches of Gubler, etc., the author deems it fair to conclude that the syndrome of symptoms, taken in conjunction with the undoubted fact of the contact of lead with the infant's mouth, make the diagnosis of lead-poisoning beyond dispute. An inquiry into the question of applications to the nurse's breasts is, therefore, clearly indicated in cases of obscure colic and constipation in sucklings.

SMALL-POX.

OUTBREAKS of small-pox have been reported from a great number of places, both in the United States and elsewhere, during the last few weeks, and some cases have occurred in New York. They emphasize the importance of turning a deaf ear to the antivaccination agitators.

THE WINDSOR HOTEL DISASTER.

THE great loss of life and the large number of injuries that occurred in connection with the burning of the Windsor Hotel, on Friday of last week, are perhaps to be ascribed in part to the fact that Fifth Avenue, on which the building was situated, was blocked at the time with people who were watching the St. Patrick's

Day parade, thus delaying the access of the firemen and embarrassing them in their work. But this can not be taken as the chief cause. It is evident that the house was ill fitted to protect those who were in it against loss of life in case of fire, and we may remark that those who are teaching "first aid to the injured" might employ some of their time to advantage in teaching people how to slide down a rope properly.

THE ALL-NIGHT PHARMACY.

THERE is a shady side to almost every calling. Perhaps the all-night pharmacy is one of the most repugnant exemplifications of this fact, as set forth in Dr. Bicknell's letter printed in this issue, for it taints that aspect of the honorable pharmacist's career that is most apt to catch the eye of the public. The ordinary man, when made acquainted with the existence of such dens, is prone in his thoughtlessness to stigmatize apothecaries in general as a set of panderers to vice and weakness.

"HUSA."

SEVERAL months ago we mentioned some investigations of a mysterious plant called "husa," said to be found in the Everglades of Florida and vaunted as a cure for the opium habit, and subsequently we published a communication from the author of those investigations. We are glad to learn that Professor John Uri Lloyd, of Cincinnati, has examined into the subject and communicated his results in a paper read on March 15th at a joint meeting of the Cincinnati Section of the American Chemical Society and the Cincinnati Academy of Pharmacy. We hope soon to lay the substance of Professor Lloyd's conclusions before our readers.

THYROID PREPARATIONS CONSIDERED AS POISONS.

At a recent meeting of the Paris Academy of Medicine (*Progrès médical*, January 28th) it was noted, as the result of a report by M. François Franck, that, inasmuch as thyroid products were poisonous, no matter what their form, their sale should not be allowed, under the regulations for dangerous remedies, except on a physician's prescription, renewed each time. Such a regulation ought to be in force in the case of every potent drug.

THE RÖNTGEN RAYS IN THE TREATMENT OF CHRONIC ECZEMA.

If the application of the Röntgen rays is sometimes productive of unfortunate results, it is consolatory to find that it may, on the other hand, prove beneficial in certain morbid states. Dr. R. Hahn (*Fortschritte auf dem Gebiete der Röntgenstrahlen*, ii, 1; *Centralblatt für Chirurgie*, March 11th) reports two cases of eczema of the legs of very long standing in which a few exposures to the rays were followed by complete cure.

FORMALIN IN THE TREATMENT OF WHOOPING COUGH.

IN our issue for March 4th we published an article on this subject, by Dr. Howard S. Olliphant, of New Orleans. This article reminded Dr. R. E. Hinman, of Atlanta, of one of his own on the same subject, which appeared in the *New York Medical Times* for Novem-

ber, 1894. Dr. Hinman, it appears, used a one-per-cent. solution sprayed about the patient, whereas Dr. Olliphant employs one of five per cent. applied directly to the throat. Dr. Olliphant therefore thinks that his communication stands on an independent basis, in spite of Dr. Hinman's having antedated him in the use of the remedy for whooping-cough. We think both gentlemen are entitled to the credit of having made a genuine contribution to our therapeutical resources.

THE FOLLY OF PROTRACTED RECUMBENCY AFTER CHILDBIRTH.

At a recent meeting of the Lille Society of the Medical Sciences (*Gazette hebdomadaire de médecine et de chirurgie*, March 2d) M. Desplats brought up the question of the advisability of nine days' confinement to bed after parturition. It is not altogether a new one, but it was very forcibly dealt with by the speaker. He denied that getting out of bed was fraught with danger. On the contrary, he said, among the poor the woman got up at once, and generally she made a more satisfactory recovery than her more richly endowed sister. This, said M. Desplats, stands to reason, for it is with great difficulty that the uterine discharge, often on the verge of putrescence, escapes when the woman is lying down, whereas everything comes away freely when she assumes the upright posture.

ADDISON'S DISEASE IN A NEGRO.

At the *Société médicale des hôpitaux*, according to the *Gazette hebdomadaire de médecine et de chirurgie* for March 2d, M. Thibierge showed the unusual case of a negro, thirty-five years of age, a native of Oran, in whom the mucous membrane of the mouth showed numerous pigmented patches disseminated over the lips, cheeks, palate, and tongue, and answering to the description of the buccal pigmentations which are found in Addison's disease. The diagnosis was further confirmed by the fact that the patient's skin during the past three years had shown distinct darkening. During the same period the lumbar pains and the sensation of general asthenia associated with that disease had also appeared. The patient was, moreover, tuberculous. Whether the disease is rare in the negroes, or whether it is that the discoloration of the skin which is usually the first symptom calling attention to it, though by no means the first to appear, is difficult of observation in them, certainly recorded cases are by no means common.

OSTEOPLASTIC OPERATIONS FOR INTRACRANIAL DISEASE.

OVER-ENTHUSIASM on the subject of opening the skull for the relief of various morbid conditions within it is likely to be toned down very considerably by such judicious statements as those made by Dr. George Emerson Brewer at a meeting of the New York Neurological Society held on March 7th. Dr. Brewer reported that, out of from thirty to forty cases of intracranial disease that he had seen in the City Hospital during the last five years, nearly all of them in consultation with the neurologists of the hospital, sixteen had come to operation. Seven of the patients had been in fair physical condition at the time. In thirteen out of the sixteen cases a lesion sufficient to account for the symptoms had been found. In two instances the operation had undoubtedly saved life. In none of the cases that ter-

minated fatally had there been any possibility of improvement without an operation, and in five of them death would have occurred almost immediately. The operation had been the cause of death in two instances, by acute uremia in one case, and presumably by acute septic infection in the other. He was willing to admit that this sepsis might have been avoided. He thought it quite probable that nineteen twentieths of operations done for epilepsy were fruitless; nevertheless it was well to operate in the hope of occasionally saving a person from the life of an epileptic.

THE RIGHT TO TAKE THE STATE EXAMINATION IN NORTH CAROLINA.

THE *Southern Medical Journal* for March speaks approvingly of a bill recently enacted by the legislature of North Carolina which provides that an application for examination by the State medical board shall not be entertained unless the applicant produces satisfactory evidence of having graduated from a medical college in good standing, one that requires an attendance of not less than three years and supplies such facilities for clinical instruction as meet with the board's approval; but that a license or other satisfactory evidence of standing as a legally qualified practitioner in another State shall be accepted in lieu of a diploma, and entitle the applicant to be examined. We agree with our contemporary. Legal qualification in one State may well be accepted as entitling to the examination in another.

MALIGNANT TUMORS OF THE SUPRARENAL GLAND

DR. OTTO RAMSAY has contributed notably toward systematizing our knowledge of primary malignant tumors of the suprarenal gland, in an article published in the January-February-March number of the *Johns Hopkins Hospital Bulletin*. He finds that, while such growths are rare, their possible existence has to be taken into account in the diagnosis of abdominal tumors. In a certain proportion of cases the symptoms are fairly well marked, but there are many in which symptoms pointing to disease of the organ are wanting. Skin changes are rather exceptional. The course is more rapid than is usual with similar growths in other organs. The prognosis is always serious, the only hope of relief lying in an operation, which has been successful in two instances. Its chief difficulties are the friability of the tumor, the great tendency to hemorrhage, and the frequency of adhesions.

THE DANGER OF CERTIFYING TO LUNACY IN ENGLAND.

COMMENTING on a letter of The Unrestrained Lame-tic Danger, signed "Fairfax" and printed in the *St. James's Gazette*, the *Lancet* for March 11th states that many English medical men refuse to certify to a person's lunacy under any circumstances, because, in the event of the committed person's being subsequently set at liberty, he may bring suit against the certifier, who, even since the statute of 1890 came into operation, has to prove to the court's satisfaction that he acted "with good faith and reasonable care," a thing not always easy to do. Our New York State law, as we understand them, are certainly more liberal in this respect toward a certifying physician, so far as the possible ulterior consequences are concerned, although perhaps more vexatious in the first instance.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending March 18, 1899:

DISEASES.	Week ending Mar. 11.		Week ending Mar. 18.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	17	6	14	4
Scarlet fever.....	182	14	162	18
Cerebro-spinal meningitis.....	0	12	0	11
Measles.....	280	15	229	14
Diphtheria.....	11	5	171	30
Croup.....	11	5	8	4
Tuberculosis.....	178	202	131	169
Small pox.....	0	0	2	1
Chicken-pox.....	37	0	35	0

The Kentucky State Medical Society.—Dr. John G. Cecil, chairman of the committee of arrangements, announces that the next annual meeting will be held in Louisville, on Wednesday, Thursday, and Friday, May 17th, 18th, and 19th. All those who desire to take part in the proceedings are requested to send the titles of their papers at once to the secretary, Dr. Steele Bailey, Stanford, Kentucky.

The French Academy of Sciences.—We learn from the *British Medical Journal* that Professor Ray Lankester has been elected a correspondent of the academy.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending March 18, 1899:

Small-pox—United States.

Mobile, Ala.....	Mar. 10.....	4 cases.	
Los Angeles, Cal.....	Feb. 25—Mar. 4.....	9 " "	2 deaths.
Washington, D. C.....	Feb. 25—Mar. 4.....	10 " "	
Washington, D. C.....	Mar. 4—11.....	11 " "	
Jacksonville, Fla.....	Feb. 18—25.....	2 " "	
Savannah, Ga.....	Mar. 8.....	7 " "	
One among troops returned from Arecibo.			
Louisville, Ky.....	Mar. 3—11.....	53 cases,	1 death.
New Orleans, La.....	Feb. 25—Mar. 4.....	9 " "	
New Orleans, La.....	Mar. 7.....	10 " "	
Chicago, Ill.....	Mar. 10.....	1 case.	
Clark County, Ind.....	Mar. 1.....	Small pox reported.	
Daviess County, Ind.....	Mar. 1.....	Small pox reported.	
Floyd County, Ind.....	Mar. 1.....	Small pox reported.	
Green County, Ind.....	Mar. 1.....	Small pox reported.	
Jefferson County, Ind.....	Mar. 1.....	Small pox reported.	
Marion County (Indiana).....	Mar. 1.....	Small pox reported.	
Cincinnati, Ohio.....	Feb. 24—Mar. 3.....	29 cases,	1 death.
Cincinnati, Ohio.....	Mar. 11.....	1 case.	
Honestead, Pa.....	Feb. 11—Mar. 11.....	1 " "	
Altoona, Pa.....	Feb. 11—Mar. 11.....	1 " "	
Bedford County, Pa.....	Feb. 11—Mar. 11.....	1 " "	
Fulton County, Pa.....	Feb. 11—Mar. 2.....	1 case.	
Huntingdon County, Pa.....	Feb. 11—Mar. 2.....	5 cases.	
Somerset County, Pa.....	Feb. 11—Mar. 2.....	1 case.	
Alexandria, Va.....	Mar. 9—12.....	5 cases.	
Lynchburg, Va.....	Mar. 1—11.....	1 " "	
Norfolk, Va.....	Mar. 8—10.....	18 " "	
Portsmouth, Va.....	Mar. 4—11.....	25 " "	
Richmond, Va.....	Mar. 6—13.....	5 " "	
Madison County, Tenn.....	Feb. 13—Mar. 11.....	33 " "	
Henderson County, Tenn.....	Mar. 1—11.....	1 case.	
Shelby County (Memphis), Tenn.....	Jan. 20—Mar. 11.....	36 cases.	
Officer County, Tenn.....	Mar. 3—11.....	7 " "	
Bryan, Texas.....	Jan. 29—Feb. 13.....	24 " "	
Monterey, Tex.....	Mar. 2.....	3 " "	
Spokane, Wash.....	Feb. 25—Mar. 4.....	1 case.	

Small-pox—Foreign.

Rio de Janeiro, Brazil.....	Feb. 20—27.....	6 cases,	8 deaths.
Quebec, Canada.....	Mar. 10.....	2 " "	1 death.
Cairo, Egypt.....	Feb. 4—11.....	2 " "	
London, England.....	Feb. 19—25.....	2 " "	
Calcutta, India.....	Jan. 28—Feb. 4.....	2 " "	2 deaths.
Madras, India.....	Jan. 28—Feb. 3.....	1 " "	1 death.
Mexico, Mexico.....	Feb. 19—26.....	2 " "	1 " "
Moscow, Russia.....	Feb. 5—12.....	4 " "	5 " "
Odessa, Russia.....	Feb. 18—25.....	2 " "	1 death.
Warsaw, Russia.....	Feb. 11—18.....	3 " "	3 deaths.
Constantinople, Turkey.....	Feb. 20—27.....	16 " "	

Yellow Fever.

Rio de Janeiro, Brazil.....	Feb. 20—27.....	47 cases,	28 deaths.
Barranquilla, Colombia.....	Feb. 5—12.....	1 case.	1 death.
Barranquilla, Colombia.....	Feb. 12—18.....	1 " "	1 " "

Cholera.

Calcutta, India.....	Jan. 28—Feb. 4.....	12 deaths.
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Plague.

Calcutta, India.....	Jan. 28—Feb. 4.....	1 death.
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The Late Dr. William W. Van Arsdale.—At a special meeting of the medical board of Mount Sinai Hospital held March 18th, the following resolutions were adopted:

The medical board of Mount Sinai Hospital has learned with sorrow of the death of Dr. William W. Van Arsdale, which occurred at Atlantic City on March 17, 1899. Dr. Van Arsdale had endeared himself to all the members of the medical staff by the lovable traits of his character, and earned their respect by his eminent professional attainments and efficiency.

Resolved, That in the death of Dr. Van Arsdale the medical board has lost one of its most valuable and respected members, the institution a skillful surgeon and an able scientific worker; that the sympathy of the members of the medical board be extended to his family in their sad loss; and finally, that these resolutions be spread on the minutes and published in the *Medical Record*, *New York Medical Journal*, and *Medical News*.

Resolved, That a copy of these minutes be sent to his family.

[Signed.] ARPAD G. GEESTER, M. D.,
WILLIAM F. FLUHRER, M. D.,
Committee.

The Buffalo Academy of Medicine.—At the quarterly meeting, on Tuesday evening, the 21st inst., Dr. H. R. Gaylord read a paper on Tuberculous Infections in the Walls of the Blood-vessels and the Production of Miliary Tuberculosis, and the nomination of officers for the ensuing year occurred.

Surgeon-General Shoemaker, of Pennsylvania.—We learn from the *Medical Bulletin* that on February 7th the students of the Medico-chirurgical College, of Philadelphia, presented a sword to Dr. John V. Shoemaker, one of their professors and the new surgeon-general of the Pennsylvania National Guard.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 18th inst., Dr. M. A. Goldstein read a paper on The New Therapeutics of the Tympanic Cavity, and a discussion was opened on the papers presented by Dr. Carson, Dr. Mudd, and Dr. Bremer on The Surgery of the Gasserian Ganglion.

Two Cases of Whooping-cough treated by Aural Medication.—In the *Indian Medical Record* for February 15th Dr. S. Glanville Morris records the following

two cases treated according to the method recently advanced by Dr. G. A. Stephens in the columns of the *Lancet*, December 3, 1898:

Case I.—The patient was a boy, aged five years. He had been suffering from whooping-cough for one week. There was a discharge from both ears, very considerable from the left one. The face was puffy. He vomited with the cough and passed very bad nights. Dr. Morris syringed his ears with warm boric lotion and painted the meatus and membrana tympani in accordance with Dr. Arbour Stephen's method. The first night of the treatment the child slept well, the vomiting ceased, and the child has not whooped since. Pharyngitis, however, was still present, which caused the cough, but on the fourth day the pharyngitis had improved and the cough ceased. By the fifth day the child appeared to be well.

Case II.—The patient was a boy, aged six years. He had suffered from whooping-cough for one week. The appetite was poor; there was vomiting with the cough, but no pain or discharge from the ears. The ears were syringed and painted. On the next day there was no improvement. The treatment was continued. On the third night the child slept much better and whooped less, while the appetite improved. By the fifth day the child was well.

Medical Ethics.—Dr. Robert Roxburgh (*Bristol Medical and Chirurgical Journal*, December, 1898), in a presidential address delivered before the Bristol Medical-chirurgical Society on Progress and Practice, says:

"Now, it is as practitioners of the art of healing, as apart from its abstract and scientific aspects, that the commercial element first enters into our lives. Though it is the glory of medicine that its primary object is not money-getting, but the benefit of humanity, yet we are all agreed that the laborer is worthy of his hire, and so far from ignoring his fees every sensible man will see their fitness and insist on their payment. Unfortunately, however, it is from this side that breaches of ethical rule are apt to occur. The man who spends his days in a laboratory has few temptations to personal aggrandizement, but he whose income depends on the number of his patients is in a different position. Let me here, in the seat of a great medical school, assert that the principles of medical ethics are not taught to senior students as they should be, and students leave their school often without ever having heard the subject mentioned. It is frequently said that medical ethics are comprised in the saying: 'Do to others as you would be done by'; but that is not strictly true, for the honor of the profession as a whole, and not merely our individual advantage, is concerned in the maintenance of a high ethical standard, and perfectly upright men may make grave mistakes of etiquette without a suspicion that they are compromising principle. I have known a highly-touted young practitioner accept the post of medical officer to a notorious medical aid association, and who, the moment its true character was pointed out to him, resigned his office. I have known a man fresh from laboratory work abroad, acting on the advice of his friends, advertise in a newspaper the fact that he had purchased a certain practice, totally unconscious meanwhile that he was committing an unprofessional act. Many other instances might be named where ignorance and inexperience have had very unpleasant consequences—strained relationships, perhaps, or open rupture, between doctors practising in the same vicinity, and who

ought to have been on the friendliest terms. Of course, there are other cases where unscrupulous men, or men without gentlemanly instincts, consciously and willfully advertise themselves, or push their practice in underhand ways. For such the penalty must be isolation from the medical brotherhood of a district."

Osteomalacia cured by Chloroform.—Arcangela (*Gazzetta medica lombarda*, November 29, 1897; *Gli Incurabili*, November, 1898) records the case of a woman affected with osteomalacia for two years who kept habitually the dorsal decubitus and was unable to move herself in bed without aid. The patient, being under chloroform for half an hour, in which time she took thirty grammes, was able the same evening to separate the thighs a little. A month and a half later the pains ceased spontaneously. At the first menstruation, which occurred after twenty days of this treatment, the pains in the legs and thighs reappeared, disappearing immediately after the menstruation. The amelioration was continuous in spite of the recurrence of menstruation. The patient was then put also upon phosphorized oil, whence it may be held doubtful whether the great benefit of which the author speaks was due to the chloroform, the oil, or both.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 11 to March 18, 1899:*

FAUNTLEROY, POWELL C., First Lieutenant and Assistant Surgeon, will report to the commanding officer, General Hospital, Savannah, Georgia, for duty.

WOODSON, ROBERT S., Captain and Assistant Surgeon, is relieved from further duty in the Department of Santiago, and will proceed to Fort Clark, Texas, and report to the commanding officer of that post for duty.

A board of medical officers is appointed to meet in Washington for the purpose of making recommendations relating to a revision of the Standard Supply Table and Field Supply Table, as published in the *Manual for the Medical Department*, approved June 17, 1898. Detail for the board: CARTER, EDWARD C., Major and Surgeon; HALL, WILLIAM R., Major and Surgeon; LA GARDE, LOUIS A., Major and Surgeon; and MCNEX, EDWARD L., Captain and Assistant Surgeon.

By direction of the President, the following officers are honorably discharged from the volunteer army of the United States, to take effect this year: GUARD, ALFRED C., Lieutenant-Colonel and Chief Surgeon; KEAN, JETERSON R., Lieutenant-Colonel and Chief Surgeon; O'BRIEN, ROBERT M., Lieutenant-Colonel and Chief Surgeon; WILCOX, TIMOTHY E., Lieutenant-Colonel and Chief Surgeon; BIRMINGHAM, HENRY P., Major and Brigade Surgeon; BENN, GEORGE B., Major and Brigade Surgeon; BRYANT, WILLIAM S., Major and Brigade Surgeon; BURNS, ROBERT, Major and Brigade Surgeon; CHESNIN, PAUL, Major and Brigade Surgeon; D. NEWMAN, WILLIAM F., Major and Brigade Surgeon; FORD, FRANCIS C., Major and Brigade Surgeon; GLENNAN, JAMES D., Major and Brigade Surgeon; HED, EMER P., Major and Brigade Surgeon; JARVIS, NATHAN S., Major and Brigade Surgeon; MACMURRIN, JOHN L., Major and Brigade Surgeon; McDILL, JOHN R., Major and Brigade Surgeon; McMAHON, PETER D., Major and Brigade Surgeon; SHAKERS

SPEAR, EDWARD O., Major and Brigade Surgeon; and STEPHENSON, WILLIAM, Major and Brigade Surgeon.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 18, 1899:*

AYERHILL, H. D., Assistant Surgeon. Detached from the *Itawa* and ordered home.

BELL, W. H., Assistant Surgeon. Detached from the Naval Hospital, Washington, and ordered to the *Vixen*.

KINDLEBERGER, D., Medical Director, retired. Granted leave of absence to go abroad, from April 15th.

MCCLANAHAN, R. K., Assistant Surgeon. Detached from the *Richmond* and ordered to the Naval Hospital, Philadelphia.

ULSH, W. H., Assistant Surgeon. Detached from the Naval Hospital, Philadelphia, and ordered to the *Glacier*, April 6th.

Births, Marriages, and Deaths.

Born.

FOSTER.—In New York, on Sunday, March 12th, to Dr. and Mrs. Matthias Lanckton Foster, a daughter.

Married.

SIMPSON—THOMAS.—In New York, on Tuesday, March 14th, Dr. William Payne Simpson and Miss Lucy Alsop Thomas.

Died.

IVY.—In West Point, Mississippi, on Friday, March 17th, Mrs. G. Ivy, wife of Dr. Thomas G. Ivy.

PARKER.—In Gloucester, Massachusetts, on Thursday, March 16th, Dr. J. Howard Parker, of Boston, aged thirty-two years.

SEABURY.—In Yonkers, N. Y., on Thursday, March 16th, Dr. John H. Seabury.

VAN ARSDALE.—In Atlantic City, N. J., on Friday, March 17th, Dr. William W. Van Arsdale, of New York, in the forty-fourth year of his age.

WATERMAN.—In New York, on Wednesday, March 15th, Dr. Sigismund Waterman, in the eighty-first year of his age.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

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RIGHTS AND LIABILITIES OF THIRD PARTIES.

(Continued from page 387.)

Liability of Party asking Physician to attend Another.—Whether or not the mere request by a third party for a physician to call upon a particular patient, without stating that he acts as agent for such patient, will render the third party liable to the physician for services rendered the particular patient is a question

upon which there is some conflict, the courts in the State of New York holding the third party liable in such cases, while those of other States in which the question has arisen renounce the doctrine of liability under such circumstances.

An extreme case of the sort arose in New York city in 1873. A person called at the office of a physician. The physician being absent, he wrote upon his business card, "Call on Mrs. —, at No. — Broadway," and left it with the clerk, with the request to hand it to the physician and tell him to come as soon as possible.

The jury rendered a verdict for the physician, and the court to which the case was appealed refused to disturb the verdict. The court, in the opinion, said: "There was nothing on the card to indicate to the plaintiff, before he rendered the services, that the defendant had called at his office at Mrs. —'s request, and that he was therefore only acting as her messenger."

"The defendant might very readily have secured himself from all liability by simply writing the memorandum on a blank card, or by adding to what he wrote on his own card something that would have apprised the plaintiff of the fact that he acted in the transaction for Mrs. — as her agent. . . . Having neglected to do this, the plaintiff was, under the circumstances, justified in believing that he was employed and would be paid by the defendant."*

Later, in 1896, the supreme court refused to disturb the verdict of the jury fixing the liability upon a son who summoned a doctor to attend his father by the following words: "Doctor, I want you to come and attend my father. He had a doctor who was not satisfactory." In the opinion the court cited the case of *Bradley vs. Dodge* with evident approval.† These cases represent an extreme view, and, as the question has never been passed upon by the court of last resort in the State of New York, it is impossible to say what that tribunal will determine the law to be.

The better rule of law, it is thought, and probably the one which would be followed in any State except New York, is that the mere calling for a physician, or requesting him to call upon a certain patient, will not make one liable to such physician for his fees in the particular service. This is shown by these cases:

The superintendent of a coöperation company sent a messenger to a physician summoning him to the works of the company to attend an injured employee. The court of appeals for Missouri, in considering the matter, said: "We take it that the law will not imply, upon this evidence, a contract either on the part of the corporation or on the part of Mr. — (the superintendent) to pay for these services. The general rule, no doubt, is that, where a person requests the performance of a service, and the request is complied with and the service performed, the law raises an implied promise to pay the reasonable value of the services. But this implication does not obtain where one person requests a physician to perform services for a patient, unless the relation of the person making the request to the patient is such as to raise a legal obligation on his part to call in the physician and pay for the services. Where a husband calls in a physician to attend upon his wife, or where a father calls in a physician to attend upon his minor child, the law implies a promise on his part to pay the reasonable value of the services, because there is a legal

* *Bradley vs. Dodge*, 45 How. Pr., 57.

† *Foster vs. Meeks*, 18 Misc., 164; 41 N. Y. Supp., 950.

obligation on his part, in either case, to furnish necessities for the patient's benefit. But no such implication arises where one calls in a physician to attend upon a stranger, or upon one to whom he is under no legal obligations." Quoting further in the same case, the court said: "The reason and policy of this rule are obvious, especially in cases like the present. When a person is dangerously wounded, and perhaps unable to speak for himself, or suffering so much that he does not know how to do it, any person will run to the nearest surgeon in the performance of an ordinary office of humanity. If it were the law that the person so going for the surgeon thereby undertakes to become personally responsible for the surgeon's bill, and especially for the surgeon's bill through the long subsequent course of treatment, many would hesitate to perform this office, and in the meantime the sufferer might die for the want of necessary immediate attention." *

A case stronger than the one above given is reported in Vermont. A brother who had been acquainted with a physician took him to see his insane brother and earnestly requested him to undertake the treatment of the insane patient. There was no express agreement as to the payment for the services. The court, in considering this case, said: "It appears that all of the services were performed for the brother of the defendant, who, though insane, was liable therefor. The services were not beneficial to the present defendant, and he was under no legal obligation to pay for them unless as an express undertaking, or unless it may fairly be inferred from the evidence that it was the intention of both parties that the plaintiff should perform the services and the defendant should pay therefor." †

In the case of Rankin vs. Beale, a father sent for a physician to attend his adult son at the father's house, and after the services were rendered agreed with the physician to pay for them. The court held that the father was not bound by merely sending for the physician to pay his fee, and the promise of payment being made after the services were rendered was without consideration and void. ‡

A third party, acting as messenger, was sent for a certain physician to assist in the performance of an operation. Not finding him in, he went to the office of another physician and said: "I have come after you to go and see a sick man." The third party went part way with the physician to the patient's house, when, meeting with another person going to see the patient, he separated from the physician. Upon arriving at the patient's house, the doctor who was in attendance on the sick man explained to him what had occurred, and said that the physician who had just arrived would assist in the operation, which was assented to, and the operation was performed. The court said: "The evidence tended to show that the plaintiff (the physician) was aware of the fact that the defendant acted merely as a messenger, and did not intend, or expect, to make himself personally liable for the services which were to be rendered to the sick man. If, upon the explanation made by the doctor in attendance, the plaintiff was not willing to assist at the instance and on the credit of the sick man, it was his duty then to make known his objections.

"To hold the defendant liable under these circum-

stances would deter every one from doing the charitable office of going after a doctor for a sick neighbor." *

A physician attending a patient who was injured and lying at his son-in-law's house proposed on several occasions to discontinue his services, when he was requested not to do so by the son-in-law. After the patient's death the physician presented his bill, amounting to five hundred dollars, to the son-in-law, as a claim against him personally, and asked its payment. He did not deny his responsibility, but objected to the amount; and after a dispute and some angry words he wrote an order upon an attorney for two hundred dollars to be paid out of a certain claim when collected, and handed it to the physician, saying he would give him that, and would not pay him another cent, and if he did not take that he would not get anything. The account was charged upon the physician's books to the patient, and when the bill was presented to the son-in-law he was the patient's administrator; but that was unknown to the physician. The court said: "Though the physician in the beginning, may have rendered services solely upon the patient's responsibility, in the absence of a special contract he was not bound to continue to do so, and had the right to discontinue, and enter into a contract with the son-in-law to become responsible for his subsequent services; but, in such case, the burden is on him to show, not only a discontinuance, or a proposal to discontinue, but also an agreement on the part of the son-in-law to be responsible. There is no pretense of an express agreement; in the absence of such, it was necessary for the physician, in order to entitle him to the affirmative charge, to prove facts undisputed, from which the law would conclude an actual, though implied, agreement. The cause of the physician's proposal to discontinue his attendance does not appear. . . . Every person who may go for the regular attending physician when needed by his patient, or who, from considerations of friendship or humanity, may request him not to discontinue his attendance, does not render himself responsible for the services of the physician. Whether he does or not, depends upon the attendant circumstances." †

In the following cases circumstances have been shown which were considered equivalent to a direct contract or undertaking to pay the indebtedness.

In the case of Clark and Meigs vs. Waterman, a physician was called by the defendant to attend a girl who had lived with him from the time she was eight until she was eighteen years of age, and who had spent nearly seven eighths of her time subsequent thereto, up to the time of her sickness and death, in his household. The defendant manifested much interest in the case, was dissatisfied with the services of the first physician employed, discharged him, and employed another physician to attend the patient; he called for the bills of the physicians to lay before the town, "to see if they would not assist him." These facts were considered sufficient to show that the defendant intended and gave the plaintiffs to understand that he was himself the employer, and he was accordingly liable.

The employee of a lumber company was injured, not while in the course of his employment, but in a private brawl. The secretary, treasurer, and general business manager of the company sent a telegram to a physician as follows:

* Meisenbach vs. The Southern Cooperage Co., 45 Mo. App., 322.

† Smith vs. Watson, 11 Vt., 332.

‡ Rankin vs. Beale, 68 Mo. App., 325.

* Smith vs. Reddock, 56 Me. Law N. C., 14.

† Curry vs. Shelby, 99 Ark., 171, 18 S. Rep. 90.

‡ Clark and Meigs vs. Waterman, 7 Ark., 76.

"To Dr. —: Come here immediately by quickest means; man shot in breast.

[Signed.] " — Lumber Company."

The doctor responded, and continued his visits for six weeks. The bill was presented to the company, but they denied liability and refused to pay. The secretary-treasurer and manager denied his liability, but offered, by way of compromise, to pay ten dollars, the price of the first visit. The offer was refused, and suit brought against the company and the officer who sent the telegram. It will be observed that the telegram by which the physician was summoned was not a request for him to attend any particular person, but an order for him to report to the company direct. So far as the reported case shows, the sufficiency of this order to bind them, had it been properly authorized, does not seem to have been questioned; but the company contested the claim on the ground that the officer sending the telegram had no authority, express or implied, to bind it to pay for such services. The officer's excuse for using the company's name was that he was personally unknown to the physician, and was afraid the physician would not come unless summoned in the company's name. The trial court found that the company was not liable, but the secretary was personally liable. The principle upon which the secretary was held liable is that if the agent exceeds his authority, so that his principal is not bound, he will himself be liable for the damages thus occasioned to the other contracting party, although he may have been innocent of any intention to defraud.*

A landlord sent orders to a physician requesting him to call upon his tenants. The physician understood from the orders that the landlord intended to pay, and accordingly charged the services to him and made no efforts to collect from the tenants. The landlord testified that he did not consider that the orders made him personally responsible; afterward, however, he offered the physician some fodder to apply on the account, and also promised to make a payment of money at a stated time. The trial justice gave judgment against the landlord for the full amount of the claim, and the appellate court refused to disturb the judgment, as there seemed to be evidence to support such a judgment.†

The question whether or not an implied promise by a third person to pay exists in a particular case is nearly always one of fact, to be determined by the jury, whose duty it is to consider all of the attendant circumstances and carefully weigh the evidence of the parties, plaintiff and defendant, and, when such evidence is conflicting, to consider the character and reputation for truth and veracity of the witnesses, their intelligence and opportunity for knowing the real truth, and all other matters which bear upon the question at issue.

Liability of Corporation for Employment by Agent.

—A prolific source of litigation is the question of whether or not the employment of a physician by an agent or officer to attend an injured employee binds the corporation or company whom he represents to pay the physician's fee.

This question arises more frequently in connection with railroad companies than with all other concerns, the character of the employees' duties being such that they are liable to become seriously injured at almost any time and at any point on the line of the employer. When such accidents occur the services of a physician

are needed at once, and it is usual for an employee having the highest authority in the immediate locality, usually the station agent or conductor, to summon and employ for the company the nearest competent physician and surgeon. The railroad companies, instead of meeting such obligations promptly, have manifested a preference to avoid paying for the services rendered in such cases when the circumstances of hiring are not such as legally to bind them to pay. A careful examination, therefore, of what will and what will not amount to a binding obligation on the part of the company will be of material value.

General Rule of Liability.—It may be stated as a general rule that a company or corporation is under no legal obligation to provide medical attendance for persons injured in its service; and if a physician or surgeon seeks to recover from a company for attendance upon an employee so injured, he must show that he was employed to render such services by a servant or officer of the company having authority to employ him; or, if the person employing him did not have authority so to do, he must show a subsequent ratification by those having authority to act for the company in such capacity.*

Letters to the Editor.

SOME DRUG-STORE ABUSES.

128 EAST FIFTY-SEVENTH STREET, March 13, 1899.

To the Editor of the New York Medical Journal:

SIR: The modern American drug store, called by courtesy a pharmacy, is a hybrid thing, partly professional and partly mercantile. To this fact are due many of its shortcomings. The sale of miscellaneous merchandise seems, in the majority of cases, the most serious and important purpose in view, and the spirit which dominates its conduct is chiefly commercial. It is found to be, unfortunately, the fact that the percentage of profit which a drug or preparation will yield is of more importance in determining its selection than the degree of its therapeutic efficiency. An employee is held in estimation more on account of his proficiency as a salesman than because of his knowledge of medicines or his skill in their preparation.

These are wholly natural and direct consequences of the commercial domination of the calling, and in turn become causes of the further impairment of its efficiency in its legitimate sphere.

The primary purpose of the occupation seems to be largely lost sight of. The business of preparing and dispensing medicines should be an accessory to the work of the physician. The modern city drug store is more a combination of bazaar and bureau of general information.

An outgrowth of the same commercial spirit is the persistent pushing of "our own," or home-made, nostrums in place of the widely advertised articles of this class. This is a practice which is rapidly becoming general, since the competition of the department stores has abolished the profit on the popular "patents."

* Toledo, Wabash, and Western Ry. Co. vs. Prince, 50 Ill., 26. This rule is probably changed in South Carolina by a statute which imposes upon the railroad company the duty of giving notice to the most accessible physician of all accidents which occur on its road. Rev. Statutes of South Carolina, § 1690.

* Dale and Banks vs. Donaldson Lumber Co., 18 Ark., 188.

† Speer vs. Meschino, 16 S. C., 505; 24 S. E. Rep., 329.

The general sale of these ready-made medicines is bad enough, but the blind pushing of the home-made nostrum is infinitely worse. They are ill made as a rule, and are sold regardless of their appropriateness to any given case. It is a rule to pay the salesman according to the number of bottles of the "our owns" he can sell, and he can scarcely be expected to be too scrupulous in his statements under the circumstances. The customer suffers first and most severely from this system, but the doctor is discredited by interested and reckless statements, and the reputable pharmacist will in time suffer from its reflected perniciousness.

In the exercise of his legitimate functions, in the preparation and sale of medicines and allied articles, the druggist also sins against the physician and the public. The indiscriminate and unauthorized renewal of prescriptions is an almost universal practice. The physician is perhaps primarily to blame for this, but the evil is none the less in need of correction.

Prescriptions are renewed without regard to fitness, age, date, or previous ownership. The nature of the drug dispensed is not seriously considered unless in exceptional instances, and the larger share of the cases of habitual use of morphine, cocaine, and other enslaving drugs is due to this unregulated practice.

I recall a case where a prescription containing cocaine and calling for four ounces had been filled for over seven years without the physician's authorization, and it had so grown in quantity that fifteen pint bottles were sent out at a time, and this quantity at frequent intervals. I have examined morphine prescriptions filled for fifteen years and obtained without restriction, either by the original owner or by any one who represented himself as from this person. Nearly all stores are equally guilty in this regard.

The greatest and most crying evil is one closely akin to this. This is the unconsidered sale of poisons, and of the drugs which enslave. This latter feature is the worst in effect and is the most common. The laws affecting the sale of poisonous substances are insufficient at best, and are difficult to enforce. Except in those cases where the will to conform to them is present and actuates their enforcement, they are practically dead letters. Not only is it easy for any person to obtain nearly any poison on the list, but there are a number of stores in certain parts of the city—pariahs among their kind, be it said to the credit of the rest—whose revenues chiefly accrue from the sale of enslaving drugs. A considerable element among their patrons is the class who make use of "knock-out drops" and preparations employed for similar purposes. Business is most brisk in these places when the day is done and it is near the closing hour at other stores. Then the pitiful parade of the unfortunates begins.

The painted and diamond-locked courtesan comes for her nightly portion of cocaine. She knows she is gayer, her eyes are brighter after it, and she has found how shaking and almost collapsed she becomes if anything prevents her coming, for she is like the rest of her kind, and "sufficient for the day" is her motto. The wrinkled and bent old hag with a parchment skin, blackened teeth, and dark-stained lips presents a begrimed box with ten cents or perhaps a quarter, and without a word. The two would know she wanted opium. A dozen tiny pills are given to the next applicant. She does not state her demands in words, it is not necessary. The clerk knows she wants morphine pills, and nothing less than half grain, the strongest

made, will do for her. Perhaps she takes half of them when she pauses on her way to the door. Next, when midnight draws nigh, the dreamy-eyed, emaciated throng of "dope fiends" begins to arrive, and if the store is open all night this contingent drags in from time to time until daylight. All this I have seen, and more. I have been told that there are some places where the very poor of these creatures go, and where they hold an outstretched hand for the five cents' worth of morphine and lick up the little square of white crystals from a dirty palm while they wait. I know that there are a number of stores where the opium prepared for smoking is sold, though not all who sell the other forms of the drug will handle the "dope."

In these same stores the sale of abortifacients is an important item, and they are also the distributing points for the many specifics for "lost manhood," and all that class of schemes for duping the simple-minded.

I call attention to these abuses in this way because I do not believe that the members of the medical profession, as a rule, are aware of the extent to which they exist, and, knowing myself of the depth of the evil, think something should be done toward its amelioration. From the medical profession should come the first move in the matter.

ROBERT C. BICKELL, M. D.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of December 7, 1898.

The President, Dr. S. ALEXANDER, in the Chair.

Case of Abdominal Tumor.—Dr. W. J. PULLEY presented a patient with abdominal tumor who had been exhibited before the society last winter. At that time there had been an abdominal tumor in the right hypochondriac region. This tumor had seemed to be so intimately connected with the liver that he had supposed it to be a growth of the liver, or a cyst of the gall bladder due to obstruction of the common duct. Previous to coming under observation, three years ago, while lifting a very heavy wagon, he had experienced severe pain in the right lumbar region. About one week later he had felt an enlargement in the right side. When seen by the speaker shortly afterward, he was very anæmic, and there was a tumor under the free border of the ribs which was moderately movable. It was not associated with fever or pain. The tumor did not seem to be connected with the kidney. Under tonic treatment the patient had rapidly improved, and had returned to the country. On October 1, 1898, he had again come under observation, and the tumor at that time had been very much larger than before. The patient had then been operated upon by Dr. Joseph D. Bryant, and a simple cyst, connected with the right kidney, found. Most of the kidney found in a healthy condition, the organ had been left in situ.

Dr. JOSEPH D. BRYANT said that at the time the patient had been previously presented to the society there had been considerable doubt as to the situation and nature of the tumor. The patient had come under his care on October 5th. The tumor was to the right of the

median line, and extended firmly under the ribs down to the anterior superior spinous process. He had been seen at that time by many of the visiting surgeons and physicians of the hospital, who had declared the tumor to be one connected with the kidney. He had then made an incision, about five inches in length, purposely through the left rectus muscle to inspect the tumor. The incision having been extended until its upper limit was at the free border of the ribs, he had endeavored to remove the growth. In removing such a tumor connected with the kidney, the question came up as to the removal of the tumor at the outer side of the descending colon by carrying the colon across to the median line, thereby saving the vessels and obviating the danger of sloughing, or of opening directly downward upon it, and in that way endangering, to a certain degree, the vessels supplying the colon. Scrutiny of the anterior surface disclosed the fact that the pressure which had existed for a long time had been such as to destroy the vascular channels crossing it. An incision had therefore been made through the peritoneum over the tumor, and an attempt made to pull it off. That had been found impossible to do except at the periphery. The tumor was firmly pressed against the right side of the abdominal wall, and extended across a considerable distance to the left of the vertebral column. The tumor had then been tapped with a trocar, and three quarts of fluid evacuated. It had then been easy to raise a portion of the sac up through the incision. While doing this, it had been noticed that the kidney appeared to be normal, both as to size and general physical appearance. It was deemed wiser to attach the sac to the opening, and this had accordingly been done. After the sac had been drawn up, and before it had been stitched to the opening, a considerable portion of the sac had been cut away from the top. Through this opening the finger could be passed down to the bottom. The base was made up of the anterior surface of the kidney and of the sac. A large number of complete layers of lymph were washed out, the sac stitched to the wound, and counter drainage carried through the flank. The object of this drainage was to allow an easy exit for the pus if inflammation should ensue. The patient had made a comparatively smooth recovery. When he left the hospital there was a sinus, and this still existed, although it was quite superficial. The patient's general condition was markedly improved. Dr. Harlow Brooks had reported that no form of anatomical elements, with the exception of leucocytes, had been found in the cyst fluid. The fluid had been stained for bacteria, but none had been found. The membrane lining the cyst was composed of lime salts and disintegrated fibrin.

Dr. J. W. S. GORLEY remarked that there seemed to be fluid still present, as indicated by an obscure sense of fluctuation, obtained by bimanual palpation.

Prostatectomy.—The PRESIDENT presented a fresh specimen of a prostate that had been removed that day by prostatectomy. The patient was about sixty-two years of age, and he had had for five years marked symptoms of prostatic obstruction. He had begun catheter life three years ago, and had been entirely dependent upon the catheter during the past year. During this time, the speaker said, he had operated upon him twice by litholapaxy for recurring phos-phatic vesical calculi. The first operation had been done under a general anesthetic, and the second under cocaine, the interval being five months. This last operation had

been done two months ago. Since then there had been evidence of spasm at each urination, which occurred every two hours. Before the first stone operation had been done prostatectomy had been advised, but the patient, who was a physician, had declined to submit to it. This morning the two large lateral lobes and a smaller one occupying the position of the middle isthmus had been removed. There were also several smaller fragments. All had been removed by sub-mucous enucleation. He hoped to be able to show the ultimate result.

(To be concluded.)

Book Notices.

The Practice of Obstetrics. By American Authors. Edited by CHARLES JEWETT, M. D., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital. Illustrated with Four Hundred and Forty-one Engravings, Thirty-four of which are in Colors, and Twenty-two Colored Plates. New York and Philadelphia: Lea Brothers & Co., 1899. Pp. xiii-17 to 768. [Price, \$5.]

It is not an easy task to prepare a variorum book of no larger bulk than this that will fulfill the editor's aim, that of furnishing "a clear and practical treatise suited to the needs of medical classes" and "a concise and comprehensive guide for the practitioner." It seems to us, however, that Dr. Jewett has succeeded very well in the undertaking.

The chapter devoted to the changes wrought in the maternal organism by pregnancy might perhaps have been amplified to advantage. On the other hand, an unusual amount of space is devoted to the care of the newborn child, and the advice given is very judicious.

Manual of Ophthalmic Surgery and Medicine. By WALTER H. JESSOR, M. A., M. B. Cantab., F. R. C. S. Eng., Ophthalmic Surgeon to and Lecturer on Ophthalmic Medicine and Surgery at St. Bartholomew's Hospital, etc. London: J. & A. Churchill, 1898. Pp. xiv-169. [Price, \$3.]

THIS is a tolerably systematic, practical, and concise manual, intended for students, and better adapted for the English than the American student. It contains twenty-three chapters and an appendix. The few illustrations in black are good, but the chromolithographs are defective in coloring. It seems almost impossible in a student's manual to give a good chapter on the errors of refraction and accommodation, and this book is no exception to the rule. On the other hand, the chapter on muscular anomalies is a really good one, and very clear. For the student in this country there are, however, better text-books.

A Syllabus of Materia Medica. Compiled by WARREN COLEMAN, M. D., Instructor in Clinical Medicine and Materia Medica in Cornell University, Medical Department, etc. New York: William Wood & Co., 1899. Pp. vi-169. [Price, \$1.]

THIS is an excellent little guide to the more important drugs used in medicine, with the doses and therapeutic actions arranged under each drug. There are

also useful tables of the alkaloids, the official preparations, etc.

Atlas of External Diseases of the Eye. By A. MALT-
LAND RAMSAY, M. D., Ophthalmic Surgeon, Glasgow
Royal Infirmary, etc. With Thirty Full-page Colored
Plates and Eighteen Full-page Photogravures.
Glasgow: James MacLehose and Sons. New York:
The Macmillan Company, 1898. Pp. xvi-195.
[Price, \$20.]

This is a magnificent specimen of the bookmaker's
art. It is a folio volume of nearly two hundred pages.

The illustrations are supplemented by the text,
which gives detailed descriptions of the various diseases
in their different phases. This text is a model both of
conciseness and of comprehensiveness. The various dis-
eases are considered in their aetiology, symptomatology,
and pathology with a fullness and care that are most
admirable. The illustrations are the most perfect of
their kind that have yet been published. The plates
have been executed from photographs of actual cases met
with at the author's clinic at the Glasgow Eye Infirmary.
The whole book is the most perfect type of what is best
in text and illustrations, and the author's work is admi-
rably supplemented by the publisher's art.

BOOKS, ETC., RECEIVED.

*General Physiology: An Outline of the Science of
Life.* By Max Verworm, M. D., Ph. D., A. O. Professor
of Physiology in the Medical Faculty of the University
of Jena. Translated from the Second German Edition
and edited by Frederic S. Lee, Ph. D., Adjunct Pro-
fessor of Physiology in Columbia University. With
Two Hundred and Eighty-five Illustrations. New
York: The Macmillan Company, 1899. Pp. xvi-615.
[Price, \$4.]

*An American Text-book of Diseases of the Eye, Ear,
Nose, and Throat.* Edited by G. E. de Schweinitz,
A. M., M. D., Professor of Ophthalmology in the Jefferson
Medical College, Philadelphia, etc.; and B. Alexander
Randall, M. A., M. D., Ph. D., Clinical Professor of
Diseases of the Ear in the University of Pennsylvania,
etc. Illustrated with Seven Hundred and Sixty-six En-
gravings, Fifty-nine of them in Colors. Philadelphia:
W. B. Saunders, 1899. Pp. 3 to 1251. [Price, \$5.]

Elementary Physiology. By Benjamin Moore,
M. A., Professor of Physiology in the Medical Depart-
ment of Yale University, etc. With One Hundred and
Twenty-five Illustrations. New York, London, and
Bombay: Longmans, Green, & Co., 1899. Pp. vi-295.

Addresses and Papers. By the Members of the In-
structing Staff of the New York State Veterinary Col-
lege. For the Years 1896-1898.

*Fifth Annual Report of the State Charities Aid As-
sociation to the State Commission in Lunacy.*

*Thirty-first Yearbook (October 1, 1897-October 1,
1898) of the New York Orthopaedic Dispensary and
Hospital.*

*Thirty-third Annual Report of the St. Francis Hos-
pital, New York.* For the Year ending December 31,
1898.

*Twenty-first Annual Report of the Prince of
George's Eye, Ear, and Throat Charity Hospital of Baltimore.*
1898.

*Notes on the Absorption versus the Excretion of
Milk.* By E. DUNCAN BULLOCK, M. D. [Reprinted from
the *Journal of the American Medical Association*.]

Miscellany.

Amnesia after Excitement.—Féré (*Belgique médi-
cale*, July 7, 1898; *University Medical Magazine*,
March) states that amnesia and other disturbances of
memory may supervene in persons ill with disturbances
of the nervous system or in those hereditarily predis-
posed, after injuries, excessive exertion, and even after
coitus; and that they may also follow pure psychic
disturbances either immediately or after the patient has
been exposed to them for some time. He reports the
case of a woman, who had never been ill with any nerv-
ous affection, and who resided with a sister whom she
loved very much. The latter became ill, and was nursed
by the other with great diligence and care. The sister,
however, died. The other remained apparently normal,
until the corpse was being removed from the house,
when she suddenly lost all recollection of her sister.
She remained in this condition several weeks, at the
end of which time the recollection returned suddenly in
a dream.

Diabetes Mellitus in a Ten-year-old Girl.—Haus-
halter (*Annales de médecine et chirurgie infantiles*, No.
13, 1898; *University Medical Magazine*, March) reports
a most unusual case of diabetes in a young girl aged ten
years. The glycosuria amounted on an average to about
a hundred and twenty-two grammes of sugar a day,
during an irregular observation of seven months. Poly-
uria was not excessive. The subjective manifestations
consisted of thirst and polyphagia, which were not
marked. Various abscesses developed on the lower ex-
tremities, the disease progressed, the child became mar-
rantic, and died at the end of about two years, despite
all treatment.

**Treatment of Chronic Metritis with Chloride of
Zinc.**—Delbet (*Annales de gynécologie et d'obstétrique*,
January; *Indépendance médicale*, March 1st) says that
intra-uterine injections of chloride of zinc appear to be
equally efficacious in chronic metritis with curettage,
and possess, moreover, two appreciable advantages:
they do not risk aggravation of lesions of the annexa;
and, secondly, they do not call for anaesthesia or lay
the patient up. Many patients rise immediately after
the injection, and even those who suffer somewhat can
get about their occupations after a few hours of repose.

**The Treatment of Suprapubic Vesical Fistula with-
out Operation.**—Dr. Charles Lester Leonard (*Thera-
peutic Gazette*, February 15th) records the following in-
teresting case:

Three months before the patient came under his
care she had been operated on for a pelvic abscess. By
some mischance the bladder had been opened and a su-
prapubic fistula had formed, through which both urine
and pus were discharged, while there had been a contin-
uous interference of infection between the abscess, the
bladder, and the surrounding pelvic soft parts.

The only treatment resorted to before
Dr. Leonard saw her had consisted in irrigation on the
known tendency of such a case to become chronic, the
but little had been accomplished, and a permanent fistula
had as a consequence the patient was in a most de-
plorable condition, with some suppuration and a most
serious and connective tissue infection from the protracted
of infection can be made to the patient's health.

condition of the patient and the extent of the infection, with the probability of renal involvement, made it seem desirable to defer operation until the patient's physical condition could be improved. She was therefore removed to a private hospital ward, where strict antisepsis could be maintained.

The first indication in the treatment was the prevention of any further interchange of infection between the bladder and abscess cavities. Suprapubic siphon drainage was secured for the bladder in the following manner: A fine rubber drainage tube was threaded upon a silk ligature attached to an eyed probe. After the probe had been passed through the sinus into the bladder, and while it was held by the attached ligature, the drainage tube was slipped over it into the bladder. A suitably connected tube conducted the urine into a receptacle beneath the bed. Drainage tubes were passed into the abscess cavity and sinuses in a similar manner. A wall of granulation tissue speedily formed between these various tubes and effectually prevented any further intercommunication.

The marked cystitis was treated by irrigating with hot boric-acid solutions, and as soon as inflammation of the external genitalia, which had resulted from the continual flow of pus over that region, had subsided, a catheter was passed and through-and-through irrigation was used daily. The urine was also sterilized and rendered acid by the administration of benzoic acid as employed by Emmet in the following formula:

B. Benzoic acid	2 drachms;
Boric acid	3 "
Distilled water	12 ounces.

M. S.: One tablespoonful well diluted three or four times daily.

The general pelvic tenderness was rapidly decreased by the external application of a fifty-per-cent. ichthylol ointment and the same drug was used in vaginal suppositories.

The greatest difficulty experienced was in the treatment of the abscess, as antiseptics had to be employed that would not irritate the bladder, while it was impossible to get good drainage. The complete emptying of the abscess cavity and thorough antisepsis were secured by the employment of the official boroglyceride, which, while acting as a non-irritant antiseptic, also, by its greater specific gravity caused the displacement and expulsion of all the pus. Although the progress toward recovery was at first slow, the combined local and constitutional treatment enabled the patient to make such progress that operation was again postponed.

As soon as the urine became normal and the sinuses ceased to discharge pus, the suprapubic drainage was removed and catheterization at regular intervals substituted. The drainage tubes in the sinus leading to the abscess cavity were not removed till the urinary fistula had healed. This occurred promptly after the removal of the siphon drainage. The sinuses leading to the abscess cavity were then allowed to heal; their healing, however, did not take place as rapidly.

In all the sinuses the first drainage tubes introduced were necessarily small, but each gradually dilated the sinus in which it lay, when a larger one was introduced in the manner described.

The continued good health of the patient (now over two years) and the knowledge of the condition probably produced by the numerous pelvic adhesions have deterred the author from further operative interference, which, unless new indications arise, seems hardly justifi-

able. The author says that the case is of interest as a demonstration of the relief that proper antiseptic measures can afford in cases where suppurative disease has so depressed the system and devitalized the tissues that operative interference is hazardous and inopportune. It also illustrates the fact that conservative antiseptic surgery, in certain instances, is capable of assisting Nature to accomplish cures where radical operation would certainly be attended by failure; and further, that asepsis or antisepsis is essential to the spontaneous closure of suprapubic vesical fistula.

Suprapubic Transplantation of the Penis.—Wagner (*Centralblatt für Chirurgie*, July 30, 1898; *American Journal of the Medical Sciences*, March, 1899) reports a case in which, as the result of trauma, so great a defect ensued in the posterior portion of the urethra that it was impossible to close it by the usual methods. There had been great loss of tissue, with a recto-vesical fistula as well as a perineal one, and the rectum had been so injured that it became necessary to do a formal resection of the lower portion for the resulting stricture.

The extensive scar tissue which resulted from these conditions made it impossible to obtain normal skin for a plastic operation. Mikulicz, who was the operator, therefore determined upon a new and radical measure. An incision was made from above the symphysis pubis down upon the dorsum of the penis, and reached the bone. The ligaments supporting the penis were detached, and with them the entire penis without injury to it. The peritoneum was displaced upward and the bladder wall exposed. A deep groove was cut in the symphysis pubis, which permitted the penis to lie in it. The urethra was then united to the bladder above the symphysis, and a catheter passed through into the bladder, where it was permitted to remain. The case followed a very satisfactory course. The union of the penis to the bladder was uncomplicated, while the urethra was kept dilated by the judicious employment of gradual dilatation by sounds. The urine was passed by the catheter, and the patient at the time of the report was able to retain the urine for two hours and then pass it in a stream. Sounds, however, had to be used regularly to keep the urethra from contracting. The perineal fistula decreased in size, but urine would dribble through it if it was retained over two hours. The result attained was far preferable to any that could have been secured by other means, and is one that can be employed wherever there has been an extensive destruction of the prostatic and membranous portions of the urethra.

A History of the Case Essential.—The *Doctor's Fac-lotum* for March and April quotes the following from *Puck*:

"A man must not only have a fractured skull but a clear and coherent explanation of how he came to get it before he is admitted to a New York hospital."

Ligature of the Common Carotid for Hæmorrhage from the Ear.—Dr. Stewart (*British Medical Journal*, February 18th), at a recent meeting of the Leeds and West Riding Medico-chirurgical Society, said that on May 18, 1898, he was called to a child suffering from hæmorrhage from the ear. On arrival he found a little girl, aged three years, lying on a sofa almost lifeless. Three weeks before she had got thoroughly wet, and a few days afterward a lump appeared at the angle of the left jaw, with pain on swallowing. On the fourteenth day from the appearance of the swelling in the neck, the child

complained of intense earache, and a few hours afterward there was a profuse discharge of foul, greenish pus from the left meatus. Forty-eight hours later an attack of hemorrhage from the ear occurred, followed by another on the same day, and two more on the day following. The bleeding always ended in faintness. Dr. Stewart saw the child on the third day from commencement of the hemorrhage, when she had another attack. He packed the external meatus with gauze, and banded the head up tightly, but, as the bleeding recurred during the night, the mother consented to an operation. The left common carotid was tied. The child was quite well within a week. The blood was distinctly venous in character. The only change noticeable after the operation, and one which still persisted, was a flushing of the right side of the face, with profuse sweating on exertion, as compared with pallor on the left side, on which the carotid was ligatured.

The Topical Use of Quinine in Leucorrhœa.—According to the *Medical Review of Reviews* for February, R. S. Miller, F. R. C. S. (*Lancet*, January 21st), confirms the observations of Dr. Hardwicke (*Review*, No. 4, p. 61). He has employed hydrochloride of quinine in all cases of leucorrhœa, granular erosion of the cervix, and in all forms of vaginitis and septic endometritis for eight or nine years. Its action is admirable, this salt of quinine being powerfully antiseptic and mildly astringent. As an intra-uterine douche in septic endometritis it is very prompt in effect and perfectly unirritating. For vaginal use he has employed pessaries of two grains or three grains of the hydrochloride in glyco-gelatin medium, one-drachm or two-drachm size, the glyco-gelatin being made with hazeline (ext. hamamelidis liq.) instead of with water. Such pessaries, especially the larger sizes, reduce uterine congestion, and cause a remarkable contraction in a flaccid vagina, so that after a few days of their regular introduction at bedtime it is sometimes necessary to employ a smaller speculum for examination. Hydrochloride of quinine is soluble 1 in 36 of water. For douching, a grain to the ounce of warm boric-acid solution answers well, as also for washing out the bladder. Four grains to the ounce with a little cocaine in boric solution makes a good urethral injection and may be used at the very earliest stage of gonorrhœa. From two to four grains to the ounce of the same salt in boric solution, with or without cocaine as required, is by far the best lotion for ophthalmia neonatorum and gonorrhœal ophthalmia, and also for ulcers following hypopyon.

The Perceptive Properties of the Hair.—Von Boehmer (*Neurologisches Centralblatt*, November 15, 1898; *Medical Review of Reviews*, February 25th) describes a new instrument for measuring the perceptivity of the hair—the electric trichæsthesiometer. There appears to be a practical field for the instrument, as the author is satisfied that perception by the hair amounts almost to a special form of cutaneous sensibility, in that it differs radically both from ordinary tactile and general sensibility. It is further apparent that in some diseases hair sensibility is lost outright, while in others it is greatly augmented; yet in these same diseases tactile and general sensibility may not be subjected to any alteration.

Injections of Gelatin in Aneurysm.—Dr. Harold Moyer (*Medicine*, March) says that a review of the recent literature justifies the following conclusions: 1.

Gelatin solutions are of some value in the treatment of saccular aneurysms. 2. They are of no value in diffuse enlargements of a vessel. 3. The remedy is used empirically, the experimental work affording little or no basis for the treatment. 4. Solutions not stronger than one per cent. should be used. 5. Great care should be exercised in technique; failures in asepsis are easily made, as the solution is a good culture medium. The solutions should be kept in a brood oven to determine bacterial growth. 6. There may be dangers in the treatment, but the observations heretofore made are insufficient to indicate what they are. 7. Absolute rest in bed should be enjoined, and other remedies suitable for these cases may be given at the same time. 8. It is not a cure for aneurysm, but may rank in the future as a treatment. 9. The method is worthy of more extended trial.

The Arterial Tissue Elements.—Dr. George Burgess Magrath (*Journal of the Boston Society of Medical Sciences*, February 7th), as the result of investigations conducted in the Sears Pathological Laboratory, arrives at the following conclusions:

"1. The elastic tissue of the aorta consists of a system of richly branched fenestrated bands or plates, circular in direction, except the innermost, which is longitudinal, and concentrically placed in the tunica media; and an interlamellar meshwork of elastic fibres derived from the processes of these plates. 2. These structural characteristics are practically constant for different levels of the aorta. 3. The elastic tissue of the aorta of the child differs from that of the aorta of the adult in that the lamellar or plates are placed more closely together, are more fibrous, thinner, and present smaller fenestrations, and the fibres and spaces of the interlamellar meshwork are smaller in the former than in the latter. 4. The elastic tissue of the arteries varies in character and distribution, justifying the recognition of several types of structure. 5. These structural characteristics are constant for different periods of life. 6. The distribution of elastic tissue in the arterial wall probably bears some relation to the function of the vessel."

The Absorption of Iron.—Dr. A. E. Austin (*Boston Medical and Surgical Journal*, March 2d) thus concludes an exhaustive paper on this subject:

"If the difference between the amount of iron ingested and the amount eliminated represents the amount retained in the body and hence absorbed, then there can be no question from these experiments in regard to the absorption of the iron of the blood when taken either in the form of hæmoglobin, as in the meat, or as hæmatin in the preparation used. This assumption also appears as fully justified as that the amount of nitrogen in albuminous food taken less the amount of nitrogen in the feces and urine represents the amount of the same element taken on by the body in the form of tissue, and this principle has been assumed as proved by all physiologists who have been engaged in experiments on metamorphosis. This also substantiates the views held by Kolbert in regard to the absorption of the blood. Considering that the amount of iron retained in the third period from the meat was proportionally as great as in the second, then the amount of iron retained from the 2058 grains contained in the hæmatin preparation must have been at least 0.0152 gramme, or 7.30 per cent. a very small portion, it is true, but it does not indicate necessarily the total amount absorbed. In applying the same calculation

to the beagle we would find that out of 0.0774 gramme in the albuminate at least 0.0026 gramme, or 3.3 per cent., was retained; hence we can not from this say absolutely that iron albuminate is not absorbed, but that the amount retained is only one half of that in the hæmatin; of the ferrous sulphate it is quite evident in this experiment that none was retained, and hence probably none absorbed. A brief summary of this work will establish the following points:

"1. That iron is constantly being eliminated both in urine and faeces even during fasting.

"2. That apparently raw meat furnishes an available form of iron for absorption under normal conditions.

"3. That inorganic iron as represented by ferrous sulphate is non-absorbable.

"4. That albuminates and peptonates of iron are absorbable but to a limited extent.

"5. That organic iron, of which hæmatin and hæmoglobin are representatives, furnishes the most easily absorbable and most valuable of all iron preparations."

Surgery among Birds.—According to the *Medical Times* for March, some interesting observations relating to the surgical treatment of wounds by birds are quoted in *Our Dumb Animals* as having been recently brought before the Physical Society of Geneva by M. Faio. He mentions the case of a snipe which he has often observed engaged repairing damages. With its beak and feather it makes a very creditable dressing, applying plasters to bleeding wounds, and even securing a broken limb by means of a stout ligature. On one occasion he captured a snipe which had on its chest a large dressing composed of down taken from other parts of the body and securely fixed to the wound by the coagulated blood. Twice he had brought home snipe with interwoven feathers strapped on the site of fractures of one of the limbs. The most interesting example was that of a snipe, both of whose legs he had unfortunately broken by a cruel shot. He recovered the animal only on the day following and found that the poor bird had contrived dressings and a sort of splint to both limbs. In carrying out this operation some feathers had become entangled around the beak, and not being able to use its claws to get rid of them, it was almost dead from hunger. In a case recorded by M. Magnin, a snipe that was observed to fly away with a broken limb was subsequently found to have forced the fragments into a parallel position, the upper fragments reaching to the knee, and secured them there by means of a strong band of feathers and moss intermingled. The observers were particularly struck by the application of a ligature of a kind of flat-leaved grass wound round the limb, of a spiral form and fixed by means of a sort of glue.

The Misericordia; a Surviving Mediæval Ambulance Service.—The Rome correspondent of the *Lancet* in its issue for February 25th gives the following interesting account of this ancient institution:

"When the *Romanesque of Outdoor Relief* comes to be written it will owe one of its most touching, most picturesque chapters to the Misericordia—a brotherhood peculiar to Tuscany, and at its best in Florence, though at considerably an *exile* at Siena, Pisa, Lucca, and elsewhere, and represented in the minor provinces by a *convalescent* or *maritime*. Each is tied in origin, it was founded in 1344 by Pietro di Luca Borini and his *permanence* drew from every social rank, all and

individually bound to serve whenever summoned, without fee or reward. The Grand Duke himself, when presiding at a State banquet in the Pitti Palace, has had to rise and leave his guests when his turn came and to bear a hand with tradesmen, nobles, mechanics, professional men—with the company, in fact, promiscuously improvised to transport to hospital some victim of an accident or to carry a patient from the sick bed to the suburban lodging indicated by the physician. The service is not one of 'unskilled labor.' The members of the brotherhood have all been previously trained to lift the sufferer from the street, to turn the patient in bed, and put him on the 'bara' or stretcher with the minimum of pain or of risk to compromised limbs or organs, and thereafter to bear him through the thoroughfares to his destination with the least possible vibration, friction, or disturbance. As often happens, the particular company told off on sudden duty is composed of men as various in altitude as they are in social position, so that in carrying the 'bara' shoulder high they employ for the first part of the journey those of them who are as nearly as possible of the same height, and when these are tired they lower their burden to the less tall without interruption of movement or alteration of pace, and so continue the shifting process till the sufferer is at his journey's end and laid down in bed with scarcely the consciousness of having been transported at all. Few sights or sounds are more impressive in the Florence of to-day than the 'measured march' of the Misericordia through its crowded streets, as robed in black gowns and hooded in black cowls with openings for the eyes the brotherhood wends its way with its burden, the bystander lifting his hat sympathetically, the traffic reverently falling aside, and the street noises subdued to a momentary hush in presence of

"The still, sad music of humanity."

An Unfeeling Jest.—From St. Louis, Missouri, to India and back is a long way, but the *Indian Medical Record* for February 1st is responsible for the following:

"Doctor," said Pat to Dr. Marks, of the St. Louis City Hospital, "I hain't had no feelin' in this yere leg for twenty years." "Well, let's see it," replied the doctor. And Pat, pulling up his trousers, exhibited a wooden leg.

Medical Gleanings from Roman Egypt.—The *Lancet* for February 25th says that it is probable that no archaeological literary discovery of the expiring century will in future be so celebrated as the rescue from the sands of the Egyptian Fayoum of more than ten thousand complete and fragmentary papyri by the explorers acting under the auspices of the "Græco-Roman Branch of the Egyptian Exploration Fund," a society which at its commencement owed much to the late Sir Erasmus Wilson. A selection from some fourteen hundred documents, the greater part of which are at Oxford and the minority at the Ghizeh Museum, has been made by Messrs. Grenfell and Hunt, who have carefully edited about a hundred and fifty of them and published them with a commentary in a volume entitled *The Oxyrhynchus Papyri: Part I, with Eight Facsimile Plates*. First in importance is the now famous portion of a "Logia," or collection of "Sayings of our Lord." There are also pieces by Sappho, Thucydides, Plato, and other classical writers. The first papyrus of medical interest is No. 39, which is from the military archives of Oxyrhynchus.

-chus, and is the certificate for the release from army service of one Tryphon because of defective eyesight. It reads thus: "Copy of release, dated and signed in the twelfth year of Tiberius Cláudius Caesar. Release from service was granted by G. Vergilius Capito, prefect of Upper and Lower Egypt, to Tryphon, son of Dionysius, weaver, suffering from cataract and shortness of sight, of the metropolis of Oxyrhynchus. Examination was made at Alexandria." Another papyrus gives an account of a lawsuit relative to the identity and the custody of an infant who had been placed with a baby farmer. Papyrus No. 51 is the report of a medical officer upon a case of suicide and is dated A.D. 113. A similar document is to be found in the large collection of Greek papyri in the Berlin Museum. The present one is as follows: "To Claudianus, strategus, from Dionysius, son of Apollodorus, son of Dionysius of Oxyrhynchus, public physician. I was to-day instructed by you through Heraclides, your assistant, to inspect the body of a man who had been found hanged, named Hierax, and to report to you my opinion upon it. I therefore inspected the body in the presence of Heraclides at the house of Epagathus in the Broad-Street quarter and found it hanged by a noose, which fact I accordingly report."

Puerperal Convulsions in both Mother and Child.—

Dr. A. Barnes Hughes (*British Medical Journal*, February 25th) says that while attending a primipara of whom he had no previous knowledge he found a first cranial presentation and the os well dilated. He ruptured the membranes and a few sharp pains brought the child down to the outlet. During a pain the woman became convulsed, tonic and clonic spasms being well pronounced, and lividity over the whole body. She remained absolutely unconscious, even after the clonic spasms had passed away. He was able to feel the clonic spasms of the child *in utero*. During a pause he delivered her on the back by means of Simpson's forceps, but this act brought on another fit, and on the birth of the child—a very small one—he found that it also was in convulsions and remained so for a period of from fifteen to twenty seconds, the spasms passing away from both mother and child at the same time. The placenta was removed naturally.

The patient remained unconscious for an hour and a half, having a fit at intervals of half an hour. At this point an idiotic expression passed over the patient's face, and she sprang up in bed and attempted to tear the face of the nurse. By restraint, and the absence of the nurse, the patient was quieted. He then injected subcutaneously a third of a grain of morphine and an eightieth of a grain of atropine, and with the exception of one fit, she remained quiet but unconscious for five hours. Then a succession of fits supervened, six taking place in half an hour. He further injected subcutaneously a quarter of a grain of morphine, and she then seemed to sleep.

At eight o'clock next morning she was still sleeping, and had had no recurrence of the fits during the night. She woke as the doctor called at 11 A.M., and recognized him and the nurse, and, though in a dazed condition, was able to converse rationally. From that time on she made a quick recovery. She was unable to pass her urine for two days, necessitating the use of the catheter. On the third day the temperature was 100° F., and he then douched the uterus. He put her on a sedative mixture, and had belladonna plasters ap-

plied to the breasts, and she made an uninterrupted recovery. On the fourteenth day he visited her for the last time, and found mother and child doing well.

The Clinical Significance of Fatty Stools.—Zoja (*Clinica medica italiana*, 1898, p. 589; *Gazette hebdomadaire de médecine et de chirurgie*, February 26th) emphasizes the necessity of clinically distinguishing between saponaceous and fatty stools. Saponaceous stools, improperly called acholic, he says, owe their peculiar appearance to the presence of a large quantity of insoluble soaps and fatty acids; while fatty stools contain fats recognizable macroscopically, and are the highest expression of dyspepsia. These forms have different clinical significations. Fatty stools indicate chiefly the absence of the pancreatic juice, whether primary, or associated with a lesion of the mucosa of the glandular duct, or with occlusion of the choledochus. Saponaceous stools indicate a trouble of the absorbent apparatus, or, when they coexist with signs of biliary occlusion, the absence of bile in the intestine, or the two conditions combined.

The Relation between Maternal Diseases and the Development of the Fetus.—M. Charrin and M. Nattan-Larrier (*Presse médicale*, February 23d) presented at a recent meeting of the French Society of Biology the case of a young woman of nineteen years who succumbed in the course of typhoid fever of hypothermic type to cardiac syncope. This patient, in the seventh month of pregnancy, gave birth a few hours before her death to a child weighing only a little over two pounds (about thirty-four ounces and a third) which survived forty-eight hours. At the autopsy thereon were found lesions of the heart and of the liver, which latter was in a state of fatty degeneration. The intestine and the liver contained *Staphylococcus aureus* and *Bacillus coli*.

This observation tends to show to what an extent the mother's diseases may influence the development of the fetus.

The Treatment of Hysteria in Children.—Dr. Edward E. Meyer (*Pennsylvania Medical Journal*, February) thus concludes a paper on Hysteria in Children, dealing exhaustively with the subject:

Happily, he says, with children, the disease once recognized, the treatment is easy. The more strange, bizarre, and unstable the symptoms the better the prognosis. Charcot has said of hysteria, the older the woman the harder the cure. We can inversely say, the younger the child the easier the cure. This follows from their being so susceptible to suggestion. We have repeatedly said that hysteria is a psychosis. We know that it is accompanied by diminution of inhibitory force of cerebral activity, provoking thereby diminution of volition. This promotes suggestion and auto-suggestion. By working upon the latter we can alter the moods, help to increase the volitional powers and diminish the imaginative. From this it clearly follows that the treatment is normal.

A psychic disease, the treatment is psychical. In fact, medicinal treatment is not only often futile but may be harmful. Make the parents, if possible, realize their responsibility and the effects of their influence in the future progress of the malady. No feignedness, no submission to the caprices of the child, not too much rigor, and especially no corporal punishment. Too much severity is as bad as too much love. But the parents are too often unable to carry out such injunctions.

Then we have only one alternative—isolation from home surroundings. This does not mean from other patients, but simply separation from home influences. This is to many a hard point. They will ask, Why isolation in a hospital? Why not at home? They assure you that they will do whatever you say; that they can watch and attend to the patient better than strangers. You can not make them understand that the patient is harming them as well as itself. O. W. Holmes once remarked: "An hysterical girl is a vampire sucking out the blood of the people around her." Never promise a cure without isolation; do not use halfway measures, for so you only injure yourself. The child brought to a hospital realizes itself alone, it can not call on weak parents to act against the physician. Stop all visits, even letters. It finds it will not get home until cured; the new surroundings, a strange physician—all these suggestions work wonders. The family doctor is really in such cases the best physician, as he knows and understands the family and can watch the growth of the child and direct its education; but if he does not take the upper hand from the first, or allows the mother's word to have any influence, woe to his treatment! It is as disastrous as if he did not understand the case. He will not succeed, but will lose prestige, friends, and money. If unsuccessful, a specialist is called in at his or the mother's suggestion. The latter is firm, isolates and cures. Not from superior knowledge, but, being supposed to be an authority, his word is law.

Of course, there are other indications to meet. Careful dieting is invaluable. The food must be light and nourishing and may include meats and greens, but milk and fruits are the chief articles to depend upon. A daily bath or douche should be ordered. The shower and cold plunge—the latter at a temperature of about sixty degrees, for from five to ten minutes, the cold jet and cold affusions being the most important. Cold frictions, a wet pack, a Charcot douche, or a Scottish douche may all be found useful, consideration being paid to the age, vitality, and present condition. Massage and electricity, on account of their suggestiveness more than from any action in themselves, should be used. Hypnotism—often dangerous in adults—should never be used in children. The author has, however, seen the transferred system as practised at the Salpêtrière do much good. When anæmia, debility, or other diseases coexist, they should, of course, be counteracted by appropriate remedies. For hysteria, if drugs are to be used, the best are the copper salts, gold and silver chloride, and the valerianates or the sumbul preparations. Gowers recommends turpentine, and others asafœtida, but their efficacy lies largely in their taste and odor.

In regard to prophylaxis, the author states that though hereditary influences are of some moment as a causal factor, still, environment and improper education, by developing a neurotic tendency, do still more harm. Yet he thinks that only State intervention could accomplish anything. It is true that by promoting public hygiene, by exercising control of the ventilation of homes, by creating public baths, by erection of sanitary closets and good sewerage, by controlling the liquor traffic, and by public schools, it does much good. But, unfortunately, its function can not go further. It can not control drunkenness, intermarriage of neurotics, and ill-treatment of children, so that a prophylactic treatment can never be fully realized. Education, he says, is of great moment, public schools being the best.

There the child is less liable to be surrounded by weak children, and is less liable to become a victim of the epidemics of hysteria, so often seen in convents, pensions, and boarding schools. The number of hours and the time of school are also important questions. The question of exercise rightly receives attention. We know that excessive corporal exertion induces nervous exhaustion as well as excessive mental labor. The State, then, can do much, but not all. It can save us from such epidemics of hysteria as in the days of Salem witchcraft, though it can not stop hysterical camp meetings, or the Gautamas seeking after Nirvana; but by good discipline and careful education, the parents can be made to supplement the efforts of the State and to promote self-control of their offspring.

The physician should seek to direct the education and development of the children brought under his care, but he should be more alert to recognize hysteria and its manner of treatment than heretofore. How often have splints, casts, and embrocations been applied to hysterical joints, or tenotomy been about to be performed, or tumors excised, when under narcosis the contracture and swelling disappear! How often did men like Mollinger and Kneipp, how often places like Lourdes and Tries, cure patients after physicians had tried and failed! Let the physician recognize the importance of suggestion in therapeutics, and he can do what enthusiastic charlatanism has done for years. "No hysteria; no quackery," says Strümpell, and he is right.

Paralysis following Cerebro-spinal Meningitis.—Dr. W. N. Bullard (*Boston Medical and Surgical Journal*, February 16th) calls attention to certain forms of paralysis occurring in the course of cerebro-spinal meningitis and continuing after the acute stage of the disease has passed. These differ clinically from the ordinary forms of paralysis in certain respects and do not entirely correspond to the other forms of paralysis which are commonly described in connection with this disease. All his cases have occurred in children.

These cases, while at times and in certain stages precisely resembling cases of paralysis in anterior poliomyelitis, are to be distinguished clinically from the paralyzes of infantile paralysis by the following conditions:

1. In cases of paralysis following cerebro-spinal meningitis we find that pain on passive motion of the limbs persists to a degree rarely, if ever, found in anterior poliomyelitis. Such pain and tenderness sometimes exist during the acute stage of anterior poliomyelitis for two or three days, but if they last much longer than a week he is inclined to consider the case as one in which the diagnosis is to be very carefully examined. It is not uncommon, on the other hand, for great pain, on passive motion of the limbs or of certain joints, especially the ankles, to exist in cerebro-spinal meningitis one, two, or more months after the acute stage of the disease has ceased. Tenderness on pressure over the muscles also persists much longer than in anterior poliomyelitis, where it rarely continues much beyond the acute stage, but it does not last as long as the pain on motion, active or passive.

2. The character of the paralysis also differs, at least in the early stages, although later it is often nearly indistinguishable. There is always a tendency to spastic contracture in the early stages of the paralysis of cerebro-spinal meningitis. This is sometimes so marked that it is evident on casual examination—cer-

tain portions of the limbs are flexed and there is a decided muscular resistance to passive motion due to a permanent tonic contraction. More often, and particularly in the later stages, this tonic or spastic condition is not so evident and shows itself only or principally in the extreme degree of flexion (extension) at the ankle joint, the foot often being in a position of equinus, its axis almost in direct continuance of that of the leg.

3. The knee-jerk is, on the whole, less affected than in anterior poliomyelitis. In other words, there seems to be a greater tendency to retain the knee-jerk. This is rather a question of degree than of anything else, and may have been accidental in our patients. He lays stress on it only in connection with other symptoms. The knee-jerk is sometimes in this affection, as in anterior poliomyelitis, totally abolished.

4. In addition to these clinical signs we have the history of the initial attack to guide us. While certain cases occur in which it is difficult to determine the character of the initial attack, as a rule the existence of the retraction of the head and of contractions of the muscles of the back or limbs, the continued presence of extreme tenderness or pain on movement, and the duration of the acute stage of the disease enable us to determine more or less accurately the character of the case.

He has been accustomed to regard any case as suspicious in which the acute stage lasted more than seven days.

In conclusion, he draws attention to the fact that the conditions in these cases closely resemble, if they are not identical with, those reported in certain epidemics of so-called anterior poliomyelitis, and to suggest that in some of these the disease, which assumes a more fatal course than is usual in anterior poliomyelitis, may really be cerebro-spinal meningitis.

He has recently seen one of the cases attacked in the Cherryfield epidemic, and its present condition would, he thinks, tend to confirm the above view.

Berberine in the Treatment of Malarial Swelling of the Spleen.—Tippaldo Lasarato (*Grice medicale*, January; *Independence medicale*, February 224) says that berberine, in addition to its bitter tonic action, has the faculty of causing the elastic fibres of the spleen to contract, especially when that organ is enlarged, in a manner similar to that of ergotone on the muscular fibres of the uterus. This is not entirely free from danger, as, if it is not administered with caution, its action may be so severe as to rupture the swollen spleen and cause fatal hemorrhage. But berberine, by rapidly and abruptly contracting the parenchyma of the spleen, drives from it *en masse* the paludal parasites which swarm in it toward the general circulation, from which arises a fresh access of pyrexia. The administration of berberine has often been known to be followed by a brusque elevation of temperature. Many physicians have on this account considered berberine more harmful than useful. However, the author points out, the action of berberine in driving the parasites from the spleen, which is their place of election, into the general circulation is very favorable to the complete destruction and disappearance of the paludism from the entire organism. The parasites expelled from the parenchyma of the spleen are pushed through the general circulation at a very inopportune period of their evolution, when they engage in a deadly struggle with the phagocytes of the blood to which they are succumb. To and this result, the Italian physicians, who have had considerable experience with the

remedy, advise its use always simultaneously with quinine, which attacks them more readily in the blood when driven out by the berberine from the spleen. In all cases of swollen spleen, therefore, save those of too old standing or the ultimate result of advanced hypertrophy or degeneration of the organ, berberine is highly commended by the author. It is given in a daily quantity of from a grain and a half to fifteen grains, according to the age of the patient, and always in combination with quinine. A favorite Italian prescription is as follows:

R Hydrochloride of berberine 15 grains;
Bisulphate of quinine ½ “

M.

To be divided into four powders, and one taken every half hour or hour, for an adult.

The Relations between Pure and Applied Science.—

The president of the Geological Society of America, in his presidential address (*Science*, January 13th), made the following trenchant remarks:

“We given all honor to applied science, yet we can not forget that it is but a follower of pure science. The worker in pure science discovers; his fellow in applied science utilizes; the former receives little credit outside of a narrow circle; pecuniary reward is not his object and rarely falls to his lot; the latter has a double possibility as an incentive, large pecuniary reward and popular reputation in case of noteworthy success. The two conditions are well represented by Henry, the investigator, and Morse, the inventor and promoter.

“Men are ignorant of their debt to closer workers because the facts have never been presented. As geologists and as citizens of no mean countries we ought to present this matter clearly to men whose fortunes have come through application of principles discovered by obscure workers. Such men are quick to perceive the justice of the claim and usually are ready to pay a reasonable interest on the debt.

“The world must advance or retrograde; it can not stand still. Continued advance in physical comfort and intellectual power can come only through intense application to investigation along the lines of pure science, which can be made possible only by affording increased opportunities for research in our colleges and by the expansion of research funds held by societies such as this.”

An Extraordinary Fraudulent Charge of Rape.

The *Gazzetta medica* of *La Capitale* for February 20th, contains the *Grice medicale* of a new case, records an extraordinary case: A beautiful young girl of eighteen was brought by her parents to the University of Turin and entered a complaint that she had been raped by a young man to whom the girl was attached. The girl, a noble, Sicilian, proved that he should be considered her lover. The crown prosecutor ordered Dr. G. and Dr. M. to proceed to make an examination of the girl, in order to establish the fact of the crime. Next day, at the first hearing of the case, the witness, Dr. G., testified that the girl was not a virgin, but that she had been raped by a young man; but the doctors found blood in the girl's drawers and then, etc. The expert, Dr. M., who was also present, and slightly indisposed, testified that he had not found blood. However, on account of the fact that the girl's drawers had been found with blood on them, the court decided in favor of the young man, and he was sentenced to prison. The case was then closed, and the girl was released. The case was a very extraordinary one, and it was a very interesting one to read about. The girl was a noble, Sicilian, and she was attached to a young man. The crown prosecutor ordered Dr. G. and Dr. M. to proceed to make an examination of the girl, in order to establish the fact of the crime. Next day, at the first hearing of the case, the witness, Dr. G., testified that the girl was not a virgin, but that she had been raped by a young man; but the doctors found blood in the girl's drawers and then, etc. The expert, Dr. M., who was also present, and slightly indisposed, testified that he had not found blood. However, on account of the fact that the girl's drawers had been found with blood on them, the court decided in favor of the young man, and he was sentenced to prison. The case was then closed, and the girl was released. The case was a very extraordinary one, and it was a very interesting one to read about.

picious of fraud and were led to the belief that the defloration had been artificially produced with the object of accusing the young man, which opinion was strengthened by the girl's mental state. They therefore proceeded to a vaginal examination. In the vagina they detected an ovoid body, smooth and movable. In attempting to remove it, it broke, and from the colored material that ran down the girl's thighs they recognized that they had broken a hen's egg. It transpired that the girl's parents, knowing that the young man had declined a marriage, had adopted this means, after a family council, to consummate their desires.

Christian Science Moneymaking Methods.—The *Christian Science Weekly* for January 19th contains the following impudent demonstration of its character as a barefaced moneymaking scheme:

"Christian Science Souvenir Spoons."

"On each of these most beautiful spoons is a motto in bas-relief, that every person on earth needs to hold in thought. Mother requests that Christian Scientists shall not ask to be informed what this motto is, but each Scientist shall purchase at least one spoon, and those who can afford it, one dozen spoons, that their families may read this motto at every meal, and their guests be made partakers of its simple truth.

"MARY BAKER G. EDDY.

"The above-named spoons are sold by the Christian Science Souvenir Company, Concord, New Hampshire, and will soon be on sale also at the Christian Science reading rooms throughout the country."

A Journal of Military Sanitation has been started in Buenos Aires. It is an octavo monthly of sixty-two pages entitled *Anales de Sanidad Militar*, edited by Dr. Marcial V. Quiroga.

The Regulations concerning the Sale of Patent Medicines Abroad.—By the courtesy of Messrs. Merck & Co. we are enabled to give the following summary of the patent-medicine laws in several foreign countries.

Austria-Hungary.—Prepared medicines, whether patented or not, unless imported for druggists, require a special permit from the customs authorities. All medicines and medical compounds are excluded from protection by the Austrian patent law, and the sale of such is permitted only to and in drug stores.

Belgium.—Patent medicines can only be sold by apothecaries or other authorized persons, and must bear the seal of the seller, who assumes the responsibility of the product.

Denmark.—The regulations in this country are very stringent. Both the importation and sale are confined to apothecaries, who may be said to hold a monopoly.

France entirely prohibits the sale of patent medicines, or, as they are called there, "secret medicines," unless such preparations are approved by a competent authority and the formula inserted in the code.

Germany.—All proprietary medicines must be retailed by a licensed apothecary, who is responsible for their effect; but the most serious restriction is the prohibition of patent-medicine advertisements in public journals, when such medicines are made by a secret formula or process. This law is vigorously enforced in Baden and in Prussia, but less stringently so in Württemberg, Bavaria, and some parts of northern Germany, while in Saxony the authorities exercise the right of prohibiting the sale altogether.

Italy.—The regulations as to patent medicines are identical with those of ordinary drugs, and in either case a statement of the composition thereof must be previously given to the board of health and its approval obtained.

Russia.—No patent medicine is allowed entry into Russia unless special permission is on each occasion obtained from the medical department of the ministry of the interior. If, after careful examination, it is proved that the production of such medicine requires elaborate work and expensive apparatus, it is allowed entry subject to a duty of about forty cents a pound avoirdupois, provided the medicine is regarded as beneficial.

Sweden.—The laws as regards patent medicines are very old and not generally in force. According to later decisions no private person, except a licensed apothecary, may import medicines of any kind without permission from the board of health or under certain restrictions for scientific purposes. Most medicines are free from duty; but advertising, except by an apothecary, is prohibited.

Switzerland.—No federal law beyond the tariff exists as to patent medicines, the sales being regulated by the ordinances of the different cantons.

Turkey is a far more promising country for patent-medicine manufacturers, as only a stamp tax of two cents for every bottle, box, or package of medicine is required. Except chlorodyne, cigarettes of cannabis indica, nitroglycerin, collodion, and chloride of potassium, medicines of any kind may be imported and sold in the country.

The College of Physicians of Philadelphia.—At a meeting of the Section in Ophthalmology, held on February 21st, Dr. C. A. Veasey exhibited a patient with atrophic retino-chorioiditis and incipient angeioid streaks in the retina; Dr. G. Oram Ring reported a successful case of iridocystectomy according to Knapp's method, and showed a patient with rupture of the chorioid and optic nerve from a baseball injury; Dr. David Riesman presented a case of day-blindness; and Dr. de Schweinitz described cases of chorioiditis and retino-chorioiditis with unusual ophthalmoscopic appearances, a case of cured sympathetic iritis, and a case of almost total detachment of the retina of three months' standing in which forty-eight hours of dorsal decubitus were followed by complete reattachment and restoration of function.

Echthol in the Treatment of Erysipelas.—Echthol, which is described as containing the active principles of *Echinacea angustifolia* and *Thuja occidentalis*, has been employed by Dr. Robert C. Kenner, of Louisville, in twenty-two cases of erysipelas. For adults he prescribes a teaspoonful every two to four hours; in very mild cases, every six hours. In severe cases he would begin by giving teaspoonful doses every hour until some manifest impression is made on the disease. All his patients treated with this preparation did well. He lays stress on seeing that the patient gets an adequate amount of nourishing food and on the use of local treatment. As an application, he advises a solution of potassium acetate, fifteen grains to the ounce of distilled water. This is applied every hour or two.

A New Italian Journal, entitled *Gazzetta internazionale di medicina pratica*, has made its appearance. It is a monthly quarto of sixteen pages, published in Naples.

Original Communications.

TREATMENT OF ECZEMA
IN INFANTS AND CHILDREN.*

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THE paper upon the diagnosis and forms of eczema to which we have just listened makes the part allotted to me possible.

I would not have ventured to present a brief paper upon the treatment of eczema unless the question of what eczema is and what it is not had been previously defined.

Infantile dermatitis, beginning with the erythema of the newborn and extending through the papular, vesicular, and bullous forms of childhood, including the impetigo and pustular dermatitides due to the irritation of pediculi and insect bites, as well as the irritated and secondarily inoculated lesions of urticaria and a number of other conditions, have been and continue to be confounded with eczema proper.

The eczema, which has so long figured in dermatological statistics as furnishing one third of all cutaneous disorders, has unquestionably included many dermatoses in which some external visible and tangible irritant has been at work, but which otherwise conformed to the requirements of redness, itchiness, exudation or moisture, and scabiness. When this rather large class of dermatitis is excluded we find that the sum total of eczema proper is materially reduced.

In the American Dermatological Association statistics for 1879 about one third of the cases were put to the credit of eczema; in the report of 1897 the ratio was about one in four; while in my personal statistics for last year in five thousand cases reported there were but about a thousand instances of eczema, or one in five.

There are some general principles which underlie the treatment of eczema which remain the same no matter what the etiology may be, and therefore apply equally to dermatitis. In these are to be included superintendence of the clothing, especially that which comes next to the body, with special reference to the degree, regulation of the bath and daily washing, re-education of the nursing periods, examining the mother's milk for quality and quantity; the prevention and correction of intestinal derangements on the part of both infant and mother, including constipation in the latter, and the protection of the infant's delicate cutaneous tract

from those irritations which may arise from various causes, including soap, water, sun heat, and cold winds. Newman has recently stated that the infant's first bath should be given only after the umbilical wound had healed. While there is no question that the matter of early bathing is often much overdone, still I know from a personal experience, in which I have myself given the first bath to many infants and have superintended it in many others, that the bathing can be carried out without injury from the day of birth. I will not presume to suggest before this audience the precautions in regard to the temperature of the water, the amount of friction, the use of coarse towels, irritating soaps, etc.

Soap is unquestionably often at fault, and it was only to-day a mother brought a child with beginning eruption upon the cheeks, and suggested that a new glycerin soap might have determined the eruption, because she had afterward tried it on her own skin and found it caused an itching.

Another general statement may be made to the effect that infantile eczema requires nursing and proper intelligent management quite as much as and often more than it needs the physician's prescription. A generalized eczema often requires the services of a trained nurse quite as much as a case of pneumonia does, if we are to expect a prompt cure.

The secret of success in treatment lies often in knowing not to stimulate when you should soothe and in picking cases which require antiparasitic remedies.

One very large class of cases which has been at times carelessly designated as belonging to the impetiginous or crusty form of eczema I believe should be called more properly impetigo contagiosa. Although I recognize a form of eczema with tendency to the formation of impetiginous crusts, I believe that often confluent lesions about the mouth, chin, and other portions of the skin surface which are associated with pediculosis of the scalp are usually eczemas which have become secondarily inoculated with pus organisms, the latter having developed in connection with the condition of looseness. In my recent clinical work I have also made a class by itself of the so-called eczema of the scalp, neck, and back occurring as a direct outcome of the irritation of pediculosis and the scratching occasioned by it, but which oftentimes does not produce typical lesions of impetigo; and to this I have given the name of

Urtica pediculosa, to indicate its etiology. In this way we find a large number of eruptions about the buttocks and genitalia, which are due primarily to, and caused by, pediculosis, and are intensified by irritation caused by the constant peaking, rubbing, and scratching of the inflamed, barbed discharges of the pediculi. These eruptions are kept in a chronic state by the constant irritation of their tiny compound pustules, and are due to their crusts.

* Read by invitation before the Section in Paediatrics of the New York Academy of Medicine, January 12, 1899.

Leaving aside, then, all those conditions which are not, properly speaking, eczema, but whose cause can be directly traced to some external irritation, and confining ourselves to the well-divided classes described in the paper to which we have just listened, we will take up, first, the seborrhoeal form in which the affection presents itself so often in early life.

The fact that infantile eczema shows a decided predilection for certain regions, notably the scalp, forehead, cheeks, the region behind the ears, flexures of the extremities, the neck, and groin, is accounted for largely by this fact of the seborrhoeal element predominating. It seems to me almost the exception to find an eczema, not clearly to be placed in the impetiginous, or in the neurotic, or reflex class, which does not present upon the anterior surface of the scalp in the region of the fontanelle evidence of greasy crusts mixed with exfoliated epidermis; or to have the mother give the history that almost from birth difficulty has been experienced in keeping this region clean and free from scales. In spite of the mother's statement that the head is washed daily, it is by no means uncommon to find large areas of the scalp covered with thick, dirty brown or almost black, greasy cakes. I believe it to be of the utmost importance that, in order to secure good and permanent results in the eczema situated upon the parts lower down, the scalp should be brought back to a healthy state of secretion and kept free from crusts and dirt.

The reason that the cheek, next to the post-auricular, is the region most frequently affected is because we have here what are termed the "flushing areas," or those of greatest vascularization. And the frequency with which the groin becomes implicated would seem to be caused by the very great abundance and activity of the secreting glands in this situation. This might also account for the natural folds being involved, and in fat babies the facilities here presented for retention of the secretions and extraneous dirt undoubtedly assist in determining the localization.

The treatment is almost exclusively local. The health of these children is usually about the average of those of equal age and social station. In nurslings, the mother's breast is taken regularly, or more often irregularly; but, aside from this, as we fail to discover vices of table or vicious habits, we can not fall back upon the much-abused *excessus in vino et venere* as an excuse for not effecting a rapid cure.

For the scalp affection, and for dry, scaly patches elsewhere, resorcin is useful, as it is in the seborrhoeal form of eczema in the adult; it is here equally efficacious, but must be used in much decreased strength, as in the following prescription:

R Resorcin (Mord.)	0.5-1.0
Washed sulphur	2.0-4.0
Catbolol	5.0-10.0
Lard	ad 100.0

M.

As an ointment base nothing seems very much superior to the long-tried zinc-oxide ointment.

In almost all eczemas about the anogenital and groin region during the past year I have been using a three-per-cent. watery solution of methylene blue, and can say without hesitation that here, as well as in erythema intertrigo in infants, it has given me most satisfactory results. The drug is somewhat analgetic, is soothing to the irritated, raw, and sometimes exulcerated surfaces, it forms a protective coating, is antiseptic, and from its discoloration leaves no doubt as to the time when a new coat of the solution is required.

In order to keep the parts free from excreta and urine I instruct the mother or nurse to place the infant regularly at each time of feeding, or every two hours, upon a small vessel with the object of teaching it thus early in life not to urinate in the diaper. If the stream does not follow upon contact of the buttocks with the cold rim of the vessel, the finger nail or any sharp-pointed object drawn from the bladder region to the umbilicus may succeed in inducing urination. In male children I have frequently accomplished this object by painting the glans penis with a drop of cold methylene solution. These methods are, at times, useful in securing a specimen of the infant's urine for analysis, and are much superior to passing a catheter or wringing out a wet diaper.

Methylene blue I have used extensively in a great variety of eczemas and believe it a valuable addition to our means of cure. Upon the exposed parts, however, the color is, in most instances, an objection; and in general the staining of the clothing might be a drawback. In point of fact, the parents are so well satisfied with the results that never has this been raised as a serious objection in any case so treated.

The form of seborrhoeal eczema is more rarely pityriasis with dry desquamation and slight infiltration of the integument. Here mild salicylic and ichthyol applications are of use, as for example:

R Salicylic acid	0.2-0.5
Powdered zinc oxide	10.0
Powdered starch	15.0
Compound tincture of benzoin	10.0
Lard	ad 100.0

M.

Naturally in this, as in any other forms, if any internal derangement is to be made out, it is to be combated by internal remedies. If there is anemia, and especially if the secretions are inactive, or there is at the same time intestinal fermentation, the following tablet, which we owe, I believe, to our worthy chairman, can be given with decided advantage:

R Calomel	gr. $\frac{1}{10}$
Saccharated iron carbonate	gr. $\frac{1}{2}$
Powdered white sugar	gr. ij.

M. S.: One crushed in milk twice a day.

In older children:

R Iron peptonate gr. xl;

Elixir of calisaya 5 ij.

M. S.: A teaspoonful three times a day.

An occasional larger dose of calomel, a sixth to a fourth of a grain, once a week, is often of benefit.

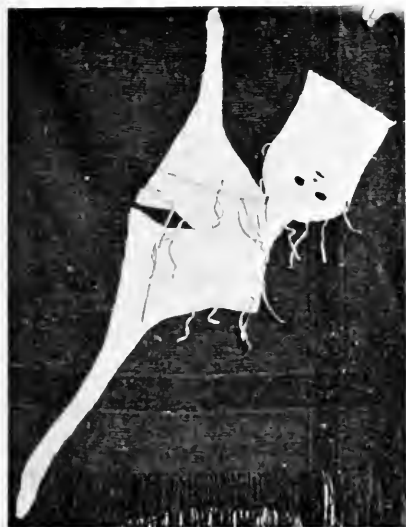


FIG. 1.—Head dressing, or cap and mask in one piece.

If the mother of the nursling is a beer drinker or a tea drunkard, or if she is in a state of ill health, or suffers from habitual constipation, her condition is to be looked after for the benefit of the little patient.

In the impetiginous form, if the crusts are thick and not readily removed by oil or soft soap, I often order a favorite cataplasm of the French made with potato flour (*fécule de pomme de terre*), but I usually order it made with some antiseptic, such as mild bichloride, carbolic acid, or lysol solution, the latter having the advantage of being somewhat antipruritic.

In the more chronic, i. e., persistent, forms of older children, and when there are extensive scaly plaques upon the back of the neck, or involving the margins of the scalp regions behind the ears, etc., I use a stiff, paste-like ointment, as in the formula:

R Resorcin	10
Tar	20
Prepared zinc carbonate, }	
Powdered zinc oxide, }	100
Lanolin	500
Lard	ad 1000

M.

This is an intermediate between stiff pastes and thin ointments without adhesive properties, and has the advantage over ordinary pastes made with starch that in

the latter, when the fat is absorbed by the crusts, the skin, and the dressings, there is left behind a residue of dry, crumbling or caking material, which is apt to act more or less as an irritant, and thus, in a measure, defeat one of the very objects for which it was employed.

When an impetiginous eczema is impetiginous because it has been inoculated with the virus of true impetigo, ammoniated mercury ointment, so useful in the latter, is, in modified strength, here likewise efficacious.

The neurotic, nervous, or reflex eczemas, usually of symmetrical distribution, occurring in young children who are florid, fat, and in fit condition, and in whom no error of diet may be discoverable, is an excessively pruriginous affection, requiring primarily applications which will allay the itching and prevent the scratching which is so pronounced an element in the dissemination and aggravation of the condition. Although attributed to the irritation of cutting the gums, it is seen not infrequently in those who have not yet reached the period of eruption of the teeth. Intestinal irritation may be found, especially if the child has reached the age at which certain liberties of diet are allowed. In the majority of cases reliance must be placed almost wholly upon external measures, and one of the most difficult problems to solve is that of retention of applications in



FIG. 2.—Cap and mask.

situ, and the prevention of moisture becoming and rubbing, especially at night. I have devised for the purpose of retaining dressings on the head and face a little cap with a mask attached, which I now show you. It is made, as you see, from a net, so that by

removing the stitches or safety pins from a single seam it can be used as a pattern from which new caps may be cut out. I find this a necessity, since mothers and nurses, however willing, are often unable to manufacture efficient head dressings. Sheet lint or linen is spread with the particular ointment which you wish to apply in strips of requisite size for the various regions, and over this is placed and securely fastened the cap and mask as devised. Besides this it is necessary to secure the hands to the side by means of safety pins, attaching the sleeve of the nightdress to the diaper. Whatever rubbing against the pillow is indulged in can then do little more than rub in the ointment applied.

There are many interesting conditions which I must refrain from more than mentioning, such as mycotic varieties requiring rather the treatment applicable to ringworm, and contagious impetigo; rare chronic conditions affecting single regions, as the fingers of one hand alone, implicating the nails and bringing about in them changes such as are seen in eczemas of bartenders and washerwomen; eczematoid conditions of the scrotum in scabies, and secondary inoculations resulting in quickly changing vesicles into pustules, the latter being surely more common in infants than in the adult, particularly in the poor and uncleanly.

We can also not do more than to note common complications—the irritation and itching incident to insect and louse bites, intercurrent attacks of urticaria, in which scratching and inoculation result in lesions which add to the already marked multififormity of eczema as it is observed in infantile life and early childhood.

The unprotected patches which become infected by pyogenic cocci still require treatment, but it must now be modified to meet the pustular development and changes in clinical features.

As to internal treatment, my first impressions of therapy in infantile eczema tended toward the theory that there were certain forms which were salutary, and that if healed or cured too quickly some internal disorder would follow.

In post-graduate study in France I was taught that most of these affections were dependent upon certain diatheses or disordered conditions of the system, and I learned the benefits of internal medication, diet, etc.

In Vienna I found that external applications were relied upon almost to the exclusion of internal therapy. Now, after twenty years of endeavor to find out which plan is nearer the truth, I have come to the conclusion that they are all in a measure right. There is external irritation operative in one instance and internal in another; irritation may be excretory or perhaps reflected to the surface from internal organs. At times a rapid disappearance of extensive eczema will be followed by intercalated eruptions, which will cause one to suspect that the surface, after receiving a relief to the particular internal organ, is once more a *terra incognita*. This I know to be

true in certain instances in the adult—gouty manifestations or asthma coming on when a chronic eczema is made to disappear—and I know of no reason why infants should not occasionally react in a like manner; but so rare is it that no one need hesitate to cure a given case in the shortest possible time. I find that the statement to the parents that their offspring's skin eruption must not be too quickly healed comes rather frequently from those practitioners whose ability to effect a rapid cure might come into question. Some cases require external means alone, others internal measures at the same time, but the great majority will do best under a judicious combination of the two.

126 EAST SIXTIETH STREET.

THE PREVENTION OF DEFORMITY AFTER EXCISION OF THE KNEE IN CHILDREN.*

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THE opportunity to observe the results of excision of the knee in children years after the operation is probably growing less each year, because at the present time but few of such operations are done.

In a *Treatise on Surgery by American Authors*, edited by Roswell Park, on page 623, volume i, we find the following: "Resection for tubercular arthritis, formerly very extensively practised, is for good reasons less and less employed. Until the period of puberty has been reached a formal excision should rarely be performed, since the removal of the epiphysis is invariably followed by very great shortening of the extremity"; and on page 640: "In tubercular disease the easy accessibility of the joint fits it particularly for the more conservative operation of arthrectomy and informal or partial excision. In the failure of this, recourse may be had to formal excision. The latter is not called for in young children, and even in youths and adults should be rarely resorted to as the primary operation, except in cases of most extensive destruction by disease."

The above was written in 1896, and may be taken to represent the views of most of the American surgeons of to-day. If we consult the four standard American text-books on orthopaedic surgery we find that Sayre in his first edition, published in 1876, says nothing against excision of the knee in children, but advises against ankylosis in a flexed position, because the solidification is very insecure and is liable at some future date to give the patient trouble. This is a most valuable suggestion, and is universally adopted at the present day.

Bradford and Lovett have a very complete article

* Read before the Orthopaedic Section of the New York Academy of Medicine, November 18, 1896.

in their *Orthopædic Surgery*, and give many valuable data collected from many sources. Their own views are clearly expressed in the following lines: "The functional results after excision are, however, decidedly inferior to the results after conservative treatment. Ankylosis is to be hoped for after excision, and is complicated by a tendency to flexion of the apparently ankylosed joint. Referring to the statistics of Hoffa, in which a hundred and thirty cases were analyzed a considerable time after the operation, and in which fourteen showed slight flexion and thirty severe flexion, they say that "this should make the surgeon very careful about removing splints before there is reason to believe that firm bony ankylosis is present. This generally occurs after the patient has been discharged from immediate supervision."

Moore, in his *Orthopædic Surgery*, in speaking of arthrectomy, says: "This operation should always be chosen for a child, because it will not interfere with the growth of the limb, as excision would."

Young, in a text-book on *Orthopædic Surgery*, published in 1891, quotes Agnew as saying that "excision is always to be preferred for children, and amputation for adults," and he believes that this agrees with the opinions of most surgeons of large experience, the question being largely one of individual judgment. He does, however, refer to the fact that in children where the resection must remove a very large portion of the shafts of both bones, amputation may be considered.

It is unnecessary to further multiply quotations, because the profession is practically in accord on the subject that excision of the knee in children is an operation that should rarely be performed, because the conservative treatment is most satisfactory and gives better results, and because in severe cases, where much bone is destroyed, the removal of so much bony tissue interferes so seriously with the future growth of the limb that the ultimate result is very poor indeed. Where the knee has become septic, and much destruction of soft tissues as well as of the bones has resulted, the more radical operation of amputation is indicated.

The chief reason that excision has been abandoned is on account of the subsequent shortening, and I would like to place on record a few of the cases I have personally seen at the Hospital for the Relief of the Ruptured and Crippled during the last two years. No attempt has been made to collect a number of cases, and therefore it could be very easily increased. I have added one case of shortening that I saw some years ago, but that I have been unable to trace.

The amount of shortening that will follow excision before the age when the lower epiphysis of the femur has firmly united to the shaft will depend upon the amount of bone removed. If the operation is performed that only the bone between the epiphyses and the joint is removed the shortening will be less than where the epiphysis is removed, and the same amount of

removal of the upper end of the tibia. Where there is extensive bone disease, to keep within the narrow limits just referred to is not only difficult but often impossible, if we desire to thoroughly remove all diseased tissue.

Koenig* gives a table of measurements showing the height of the epiphysis from the articular edge of the femur, and also the same measurements for the tibia. Ollier† has also given us similar measurements. The cartilage uniting the epiphysis to the diaphysis follows a line nearly parallel to the lower curve of the condyles, presenting two concavities, which at the age of sixteen are seven or eight millimetres, or a third of an inch, above the periphery, and at the age of five from five to six millimetres. That of the tibia is more nearly straight across and about three or four millimetres from the edge of the articular surface of the bone.

From this it follows that we can not remove a piece of bone from the lower articular edge of the femur more than thirty-five millimetres, or an inch and a half, without invading the cartilage between the epiphysis and diaphysis, from which the growth of bone largely occurs, as the epiphysis grows but little by itself. The union of the epiphysis and diaphysis occurs between the eighteenth and twentieth year of life.

These show very clearly that if the disease of the bone is at all extensive we must remove the epiphysis, and thus interfere with the growth. The earlier in life the operation is done the greater will be the shortening when adult life is reached. If the epiphyses of both femur and tibia are removed, the shortening will be greater than where one alone is removed.

The literature is fairly complete with recorded cases of shortening, and I will only report the few personal cases previously referred to.

CASE I.—A boy. Operation at age of three years. Shortening at age of nine years was six inches. Shortening at age of fifteen years and six months is nine inches and a half. Length of right femur, twelve inches and a half; right leg, eleven inches and a half. Length of left femur, eighteen inches and a half; left leg, fifteen inches.

CASE II.—A boy. Operation at age of two years. Shortening at age of thirteen years was seven inches.

CASE III.—A boy. Operation, age unknown. Shortening at age of fourteen years was seven inches and three quarters. Shortening after supracondylar osteotomy, six inches and a half.

CASE IV.—A girl. Operation at age of two years and six months. Shortening at age of seven years, eight and a half inches.

CASE V.—A boy. Operation at age of one year. Shortening at age of eleven years, seven inches and three quarters.

CASE VI.—A girl. Operation at age of one year. Shortening at age of nine years, eight inches.

CASE VII.—A boy. Operation at age of one year. Shortening at age of nine years, eight inches.

* *Technique des Opérations de Chirurgie Orthopédique*, published in 1867.

† *Leçons de Clinique Orthopédique*, published in 1887.

CASE VIII.—A girl. Operation at age of four years. Shortening at age of ten years was an inch and three quarters.



FIG. 1.

FIG. 2.

FIG. 1.—Case III. Bowleg and flexion deformity. Shortening, seven inches and three quarters, reduced to six inches and a half after supracondyloid osteotomy.

FIG. 2.—Case III. Position three months after operation.

Another objection to the operation of excision, and the one to which I especially wish to refer, is the tendency to deformity after the cases are apparently cured and bony union has taken place.

Surgeons will continue to perform this operation, and all admit that in exceptional instances it may be indicated. The opinion that it should never be performed until union of the epiphyses and shaft has taken place may be advocated by many, but it will not prevent the few from operating. To those who do operate, however, it seems to me that the following cases will clearly show the necessity of subsequent long-continued protection to the joint even after bony union seems perfect.

Not a single patient in whom the excision had been done before puberty has presented himself at the hospital two years after the excision without showing some deformity. In fact, they all came seeking treatment for the deformity, and in none can I learn that protective treatment was given the joint for any great length of time after the operation.

The deformities that may occur are flexion, bowleg, knock knee, and what is known as genu recurvatum, or a bending backward at the knee. Where bowleg is present the patient usually turns the foot in, and in knock-knee turns it out. If the tibia is rotated they may walk on inner or outer side of the foot. Of all these, flexion is by far the most common, and will surely result if at the time of the operation the leg is not put up perfectly straight. The few degrees at first may become many

degrees in after years. It is easily understood that the weight of the body pushing downward on a flexed knee tends to increase the flexion, and the action of the hamstring tendons may tend to increase this, and for this reason many operators always cut these tendons. It is also claimed that the flexion is increased, owing to the fact that in such cases there is less pressure on the anterior surface of the knee and the growth of bone is greater and, owing to lack of pressure, does not become so dense; while on the posterior surface there is increased pressure, greater density, and some interference with growth. The object of placing a limb in slight flexion is to enable the patient to have the ankylosed limb slightly shorter than the other, so as to facilitate locomotion; but this is never necessary in children, because shortening always occurs after the operation, no matter how little bone is removed.

The few cases on record where shortening has not occurred, and the few examples where, after excision, lengthening has taken place, bear such a small proportion to the total number of cases that they need not be considered. The deformity is usually progressive, and may increase rapidly or very slowly. Where it is rapid, usually there was not firm bony union to start with, and in many instances where bony union was supposed to exist it has been subsequently proved to be fibrous or cartilaginous only, yet the limb was perfectly stiff and straight, and the patient had borne weight on it for some time. Such a case is quoted by Ollier.*

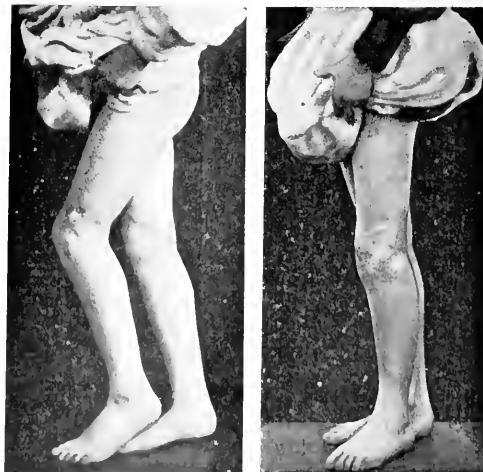


FIG. 3.

FIG. 4.

FIG. 3.—Case VIII. Flexion deformity.

FIG. 4.—Case VIII. Result after supracondyloid osteotomy.

For the prevention of flexion deformity it is necessary that apparatus be worn for a very considerable

* *Traité des excisions*, tome iii, p. 265.

period after the operation. This may consist simply of a plaster-of-Paris splint, or of a posterior or lateral splint of some firm material, preferably metal. Where the deformity exists the method of treatment should be to reduce it if possible by slight force, either with or without an anæsthetic. Most cases are better handled with the aid of the anæsthetic. If the union between the tibia and femur is firm and the ankylosis bony without a doubt, too much force must not be used, because a fracture may result or a separation at the point of union of femur and tibia. In such a case it is far preferable to do another excision, or to do a supracondyloid osteotomy. In most cases, if the deformity is excessive, an excision is indicated, and a considerable wedge of bone may have to be removed; but when the deformity is slight, but yet can not be corrected by manual force, an osteotomy may suffice. In connection with the flexion deformity we may have either knock-knee or bowleg, and in such cases we must correct both deformities. This may be done by an excision or osteotomy, or by straightening the flexion and then treating the knock-knee or bowleg by a suitable brace. The particular form of apparatus is not so essential as it is that the treatment should be thorough and kept up for some time. A simple form of apparatus, and one easily worn by children, is the Thomas knee splint, and this can be used to protect the joint, and, by the attachment of adhesive strips to the limb with buckles fastened to straps at the bottom of the brace, traction can be made and flexion deformity overcome where the ankylosis is not firm, or the brace may be worn after an excision with or without the straps. As a protective apparatus the brace may be used with a sliding foot piece. The use of crutches is rarely indicated, for, if the knee is straight and the union between femur and tibia firm, no harm will follow walking if the knee is protected. The following cases showed flexion deformity when admitted to the hospital:

CASE I.—Slight flexion.

CASE II.—Flexion to a right angle.

CASE III.—Flexion deformity of twenty-five degrees.

CASE IV.—Flexion deformity of fifty degrees.

CASE V.—Flexion deformity of twenty degrees.

CASE VI.—Flexion deformity of forty degrees.

CASE VII.—Flexion deformity of sixty-five degrees.

CASE VIII.—Flexion deformity of fifty degrees.

Cases I and III showed bowleg deformity, and Case V was one of knock-knee. In Cases VI and VII slight motion was present. None of these cases showed any recurvatum, but I have seen a case in an adult, and there is no reason why it should not occur after an excision performed in childhood.

Another objection to the operation of excision is that very often sinuses are left and may continue for a considerable length of time. The use of nails in holding the two bones together has been thought by some to be a produce these sinuses, and many do not use them for

that reason. I have also seen sinuses occur, or rather a breaking down at some point of the scar, and subsequent discharge of broken-down bony tissue many months after the wounds had entirely healed. Any little focus of disease left behind at the time of operation may start up fresh trouble even months afterward. Motion may also remain as the result of non-union, and this nearly always means a very weak knee or base of support. Knowing that the removal of the epiphysis will shorten the limb, it has been suggested by Dr. Dawbarn that in such cases at the time we operate we might also destroy or injure the epiphysis of the opposite femur by simply passing some sharp instrument into it subcutaneously, and thus shorten both limbs. I do not know that this has ever been done or that it would prove of any great advantage; it might even produce lengthening, as many cases are on record of increased growth from irritation at or about the cartilage between the epiphysis and shaft. Such a case I have shown the Section in Orthopædic Surgery of the academy, where a man had limbs of equal length until the age of twelve, when some dead bone came away from the lower end of the right femur, and to-day, at the age of fifty-five years, he has a right femur two inches and an eighth longer than the left. It is also a well-known fact that after osteitis of the femur we often get a lengthening. The following brief histories will give fuller particulars of the cases and show what treatment was employed in each case and the result.

For the short leg a patten or cork sole must be worn, and where it is excessive a Symes or some other amputation and artificial limb might even be indicated.

CASE I.—W. M., a boy, six years of age, admitted March 3, 1890. Disease began when he was three years old; operation shortly afterward. On admission had slight flexion deformity and two discharging sinuses. Treatment was local and constitutional; sinuses healed. Knee straightened by manual force under ether.

July 26, 1891.—Six inches shortening.

November 18, 1898.—Nine inches and a half shortening. Has slight bowlegs. Right femur, twelve inches and a half; left, eighteen inches and a half. Right leg, eleven inches and a half; left, fifteen inches.

CASE II.—W. B., a boy, twelve years of age, admitted June 21, 1888. Disease began when he was seventeen months old. Excision at age of two years. On admission had flexion deformity to right angle and firm ankylosis.

July 3d.—Length of right thigh, sixteen inches and a half; length of left thigh, twelve inches; length of right leg, fourteen inches and a half; length of left leg, twelve inches and a half. From right acetabulum superior spine to internal malleolus, twenty-two inches and a half; from left anterior superior iliac to internal malleolus, twenty-three inches and a half.

A wedge of bone was removed from the knee perfectly straightened, and on September 1, 1888, there was seven inches shortening. He wore a patten for the short leg and walked very well.

CASE III.—C. W., a boy, six years of age, admitted March 3, 1898. Disease began in early child-

hood, age not known; had excision shortly afterward. On admission, twenty-five degrees of flexion deformity. Seven inches and three quarters of shortening. Tibia slightly displaced outward. Bowleg deformity.

March 29, 1898.—Under ether, supracondylar osteotomy; plaster-of-Paris dressing.

December 6, 1898.—Six inches and a half shortening; leg straight; wears patten on short leg.

CASE IV.—E. G., a girl, seven years of age, admitted August 29, 1898. Excision at age of two years and six months. Has, on admission, fifty degrees of flexion deformity and half an inch shortening. Under ether, flexion deformity entirely overcome in three stretchings and leg put up straight in plaster of Paris.

November 18, 1898.—Leg straight; shortening is half an inch.

CASE V.—H. P., a boy, eleven years of age, admitted February 15, 1898. Operation at age of seven years. On admission, twenty degrees of flexion deformity and slight knock-knee; three inches and three quarters shortening. Under gas, leg straightened perfectly.

November 18, 1898.—Unable to find the patient, he having left the hospital several months ago.

CASE VI.—M. R., a girl, nine years of age, admitted February 28, 1896. Excision at age of six years. On admission, two discharging sinuses. Flexion deformity of forty degrees.

December 22, 1897.—Under gas, knee straightened.

October 17, 1898.—Sinuses all healed. Knee straight; an inch shortening. Five degrees of motion.

CASE VII.—J. G., a boy, nine years of age, admitted July 14, 1898. Excision at age of six years. On admission, forty-five degrees of flexion deformity. Slight motion in knee. Right femur eleven inches and a quarter long; the left is ten. Right lower leg, thirteen inches; left, twelve. July 28th, stretched to a hundred and seventy-five degrees, or nearly straight. Has a plaster-of-Paris cast and a Bishop brace.

November 18, 1898.—Shortening, two inches; twenty degrees of flexion deformity. Has about ten degrees of motion.

CASE VIII.—M. F., a girl, ten years of age, admitted November 10, 1897. Operation at age of four years. Flexion deformity of fifty degrees.

November 16, 1897.—Supracondylar osteotomy, subcutaneous.

February 25, 1898.—An inch and three quarters shortening; no motion; knee straight.

Conclusions.—1. Excision of the knee should rarely be performed before puberty.

2. Eriasion, arthrectomy, or partial operations are to be preferred.

3. Shortening will usually follow, and depends on the amount of bone removed and the age when the operation was done.

4. Protection should be given the knee for a long time after the operation to prevent flexion, knock-knee, genu recurvatum, bowleg, and other deformities.

5. Always put the leg up straight.

6. In severe, optic cases amputation is preferable to excision.

Mount Sinai Hospital. Dr. Howard L. Lenthal has been appointed attending surgeon to the hospital.

A FURTHER REPORT ON THE USE OF "ANTIPHTHISIC SERUM, T. R." (FISCH), IN TUBERCULOSIS.

By A. MANSFIELD HOLMES, A. M., M. D.,
DENVER, COL.

(Continued from page 409.)

CLASS II. Early-Stage Cases with Bacilli.

CASE I.—Mr. S., aged twenty-three years; nativity, Newfoundland.

Family History.—Tuberculous on mother's side. Mother died of tuberculosis at the age of thirty-nine years; began with hæmorrhages. She tried climates of North Carolina, Florida, and Alpine villages of Switzerland, with no benefit.

Personal History.—Former health good; present trouble began with hæmorrhages September 22, 1897. Had nine severe hæmorrhages within one week; following them, cough, expectoration, and night sweats developed, and temperature rose to 102° F. During three weeks previous to hæmorrhages patient had exercised rather more than usual. As soon as he was able to travel his physician advised him to come to Colorado. He arrived in Denver November 28, 1897; consulted me on the following day.

Physical Condition.—Distinct area of infiltration and dullness over upper lobe of left lung; crepitant râles over entire left lung; also small area of infection in apex of right lung, with râles. Patient had large, well-formed chest, but chest expansion was reduced to an inch and a half. Weight reduced from one hundred and fifty-eight to one hundred and thirty-five pounds; temperature, 99.4° F.; pulse, 102; sputum moderate in amount; bacilli abundant; pronounced dyspnea; strength greatly diminished; appetite and power to sleep impaired; commenced serum at once (November 29, 1897).

First Month.—Slept better; appetite improved; felt stronger; dyspnea diminished; night sweats entirely stopped; sputum frequently tinged with blood. Weight increased to one hundred and forty-two pounds and a half—a gain of seven pounds. Marked improvement in every respect except sputum, which was slightly increased and bacilli abundant; cough loose; temperature reduced; pulse beginning to fall (92–106).

Second Month.—Improvement made during the first month maintained; cough and expectoration beginning to diminish; bacilli remained abundant; temperature close to normal; pulse lower (82–90); once during the month sputum was tinged with blood.

Third Month.—Began increasing dose of serum, hoping to diminish sputum and bacilli. Patient continued to feel well and maintained the gain already made, but very little progress was apparent. Weight increased to one hundred and forty-six pounds—a gain of eleven pounds. Temperature normal; pulse greatly reduced (76–90).

Fourth Month.—Sputum greatly diminished; frequently passed several days without expectoration. March 26th an examination of the sputum was made, and, to my disappointment, it presented almost a solid mass of bacilli. Up to this time I was under the impression that the number of bacilli was a fair criterion of the severity of the tuberculous condition. The serum had been used daily during four months, and I was ex-

pecting a decrease in the number of bacilli, but found them more numerous than at any previous examination. I will frankly confess that I was disappointed and almost at the point of abandoning the serum. I, however, decided to try it for a short time longer, since all other symptoms had improved and the patient was feeling quite well.

Fifth Month.—No material change developed, except intervals of several days frequently passed without cough or expectoration. At the end of fifth month another examination of sputum was made, and I met with another surprise by not being able to find bacilli. Numerous examinations were made, with uniformly negative results; expectoration had almost ceased. In all other respects patient was well. Patient insisted on taking the serum for three months after all signs of the disease had disappeared. At the expiration of this time I gave three tuberculin tests—one, five, and ten milligrammes, respectively—with no evidence of reaction. Patient has been engaged in business six months, and states that his power of endurance is equal to, if not greater than, before the advent of the disease.

I should state that marked improvement continued for several months after discontinuing treatment. It should also be noted that the patient has recently suffered from the gripe, with rapid recovery. Sputum frequently examined for bacilli during and after this attack, with negative results. Present state of health excellent.

CASE II.—Mrs. N., aged thirty years; nativity, Kentucky.

Family History.—Distinctly tuberculous. Brother, sister, mother, and aunt died of tuberculosis.

Personal History.—Present illness began five years ago; gradually lost in weight and strength; general condition failing; weight reduced from one hundred and thirty-seven to one hundred and three pounds; cough and expectoration developed in June, 1897; came to Denver in July, 1897.

Examination, One Month later.—Small area of dullness over upper lobe of left lung; moist râles in apex; right lung normal; appetite and sleeping capacity poor; very weak and easily fatigued; afternoon temperature, 99.5° F.; pulse rapid; cough and morning expectoration; a few bacilli found. Commenced serum August 25, 1897; continued two months.

Close of Treatment.—Gained five pounds; cough and expectoration had ceased and bacilli could not be found; lung had cleared; râles had disappeared; appetite improved; slept better; temperature and pulse normal; pain had left the lungs; patient much stronger. Previous to beginning treatment menstruation had ceased, but appeared after six weeks of serum therapy. Improvement has continued since close of treatment; more than a year has passed and patient has continued in excellent health; is now living in Colorado. She, however, spent several months in her former home in Kentucky the past summer, with no tendency to relapse.

CASE III.—Mr. S., aged twenty-three years; nativity, Ohio.

Family History.—Distinctly tuberculous on both sides.

Personal History.—Telegraph editor; had been working at for one year; during this time his trouble began. Had two hemorrhages in July, 1896; seldom had cough or expectoration; had occasional night sweats. In April, 1897, the cervical glands began to en-

large on left side. Three weeks later the right cervical glands became involved. These rapidly broke down, but were not painful. Had another hemorrhage in August, 1897. Came to Denver October 13, 1897.

Examination, November 26, 1897.—Cervical glands on each side of neck much enlarged, and a number of them discharging; rough breathing over right lung; no râles; morning temperature subnormal; afternoon temperature often one degree above normal; little cough or expectoration; no bacilli found; tuberculin test not made.

Began serum November 30, 1897.

First Month.—Swelling of glands remained stationary; no new glands became involved. At close of second month I removed all enlarged glands. No treatment for one month after operation; no new glands became involved during this month. Resumed treatment again February 1st, and continued three months. During this period only one gland became swollen, and I removed it. Serum continued until May 1, 1898. Left Denver for Michigan six weeks later. Two months after returning east nine glands had enlarged and softened, and were ready for operation. They were removed in University Hospital, Ann Arbor, Michigan.

Returned to Denver November 15, 1898, six months and a half after ceasing treatment. An examination then revealed a slight lesion of the lungs; small amount of sputum, and bacilli found for the first time. The trouble has ceased in the lymphatics, there being no enlarged glands. The active foci of infection have apparently centred in the lungs, but there is very little trouble from this source. Present condition is in every respect better than any time since his trouble began. No serum has been given since May 1, 1898.

CASE IV.—Mr. W., aged twenty-four years; nativity, Iowa.

Family History.—Tuberculous.

Personal History.—Present trouble commenced during 1894 with hemorrhages. Came to Colorado, in 1894, soon after beginning of illness; expected climate to bring about a cure; gained in weight; trouble remained stationary for some time; lung affection then began to increase in severity. During August, 1897, he began to fail; cough and expectoration were increasing; afternoon fever pronounced.

Examination, November 27, 1897.—Upper lobe of right lung involved; coarse and fine râles and some consolidation; profuse expectoration, and bacilli abundant.

Began serum at once, and continued two months; improvement was marked; gained seven pounds and was much stronger; patient experienced an instantaneous reaction which I had previously neglected to explain to him. He became frightened and discontinued the treatment. Ten months have now elapsed and patient has maintained the gain made during the treatment, but has made no further progress.

CASE V.—Mr. H., aged twenty-six years; nativity, Louisiana.

Family History.—Negative.

Personal History.—Druggist; had worked hard from 6 A. M. to 10:30 P. M. during seven years; illness developed in June, 1898; cough had existed over a year. Tuberculosis diagnosed by his physician, and bacilli found June 13, 1898; came to Colorado at once.

Examination made August 7, 1898.—Much of the left lung consolidated; coarse, moist friction râles on forced inspiration; bronchial breathing; cough, sputum,

and bacilli; weight, one hundred and twenty-two pounds; right lung normal; commenced serum August 7, 1898; continued two months and a half.

Close of Treatment.—Sputum increased in quantity and thinner; less cough at night; slight gain in weight; appetite improved; feeling better and stronger; temperature and pulse close to normal, but bacilli more numerous than at any time during the treatment. Patient unexpectedly called home, and was obliged to cease treatment; expected to resume serum again.

CASE VI.—Mrs. P., aged forty-four years; nativity, Kentucky.

Family History.—Tuberculous on mother's side. Mother, aunt, and both maternal grandparents died of tuberculosis.

Personal History.—Illness began in August, 1894, with hæmorrhages; previous health good. Tried climate of North Carolina and Florida, and became worse; came to Colorado in July, 1895. Trouble was apparently held in check without treatment. Returned to Kentucky in May, 1896; came to Colorado again in November, 1896. Trouble returned in February, 1897, when I was consulted.

Examination.—Patient confined to bed; troublesome cough; pains in lungs; distinct dullness over left lung; crepitant râles; temperature, 100° F.; variable pulse. Up to this time there had been little or no sputum and no bacilli found.

Tuberculin Test.—Almost immediately after giving one milligramme "O. T." body began to itch, and a rash appeared, beginning at point of puncture. Within three hours temperature rose to 100.2° F., being one degree higher than on previous day at same hour; headache and pain in lungs.

Began serum February 11, 1898. A few days later I succeeded in obtaining a specimen of sputum; a microscopic examination revealed bacilli. July 6, 1898, patient discontinued serum on account of hot weather and inconvenience in coming for treatment. In many respects patient gained while under the treatment. In others there was no gain. Soon after stopping treatment she began to lose. A few weeks later she had a severe hæmorrhage, and was again confined to her bed. Resumed serum again November 1, 1898.

Result of Treatment (January 1, 1899).—Temperature normal; pulse normal; very little pain in lungs; bacilli continue in sputum; no gain in weight, but patient is feeling better and appetite is good; in every respect improving; treatment continued.

CASE VII.—Mr. C., aged thirty years; nativity, Nebraska.

Family History.—Negative.

Personal History.—Active disease began in June, 1898. There had been some cough during the year previous to this time; rapid loss of strength. Came to Colorado August 18, 1898.

Examination, September 22, 1898.—Extensive consolidation of upper lobe of left lung; occasional râles and impaired vesicular murmur. Cogwheel respiration; nothing abnormal detected in right lung; weight, one hundred and forty-three pounds; pulse, 96.

Commenced serum September 23, 1898. After three months' use of serum the following conditions exist: Weight, one hundred and forty-eight pounds—a gain of five pounds; patient feeling better; less cough; very little sputum; bacilli more abundant; temperature subnormal much of the time; pulse reduced from 98 to 85; left lung clearing; less dullness; râles now heard

where consolidation existed on beginning of treatment; serum continued.

CLASS III. Chronic Cases of Long Standing.

CASE I.—Mr. C., aged twenty-eight years; nativity, Nova Scotia.

Family History.—Tuberculous on father's side.

Personal History.—Attorney at law; health good until February, 1895, when present illness was manifested by hæmorrhages; aphonia became pronounced. Came to Colorado in October, 1895, soon after beginning of illness; gained during a short period; maintained this gain one year, then began to decline. At the end of two years in Colorado disease was steadily progressing. Patient had given up all hope of recovery, but as a last resort decided to test the serum.

Physical Examination, November 1, 1897.—Small cavity in upper lobe of right lung; coarse râles abundant; fine râles in apex of right lung; left lung normal; cough persistent; expectoration profuse; bacilli very numerous; no apparent mixed infection; temperature and pulse close to normal; weight, one hundred and forty-one pounds; normal weight, one hundred and fifty pounds.

Began serum November 3, 1897; continued eight months. Discharged July 3, 1898, with no bacilli in sputum.

First Month.—Cough no less, but easier; expectoration unchanged; appetite much better; tolerated serum well; pain in lungs less; weight at end of first month, one hundred and forty-seven pounds—a gain of six pounds.

Second Month.—Very little progress, but maintained former gain.

Third Month.—Felt better than at any time during previous two years.

Fourth Month.—Maintained gain already made, but remained apparently stationary; slight gain in weight (one hundred and forty-nine pounds); feeling stronger; began to increase dose; tolerated larger doses very well. Patient observed a marked improvement after beginning the use of larger doses.

Fifth Month.—All symptoms improved except cough and expectoration; sputum no less; bacilli abundant.

Sixth Month.—Weight reached one hundred and fifty-five pounds—more than he had ever weighed—a gain of fourteen pounds since beginning the serum.

Seventh Month.—Cough and expectoration decreasing, but bacilli were numerous; patient discouraged. Believing the bacilli would not disappear, we were at the point of discontinuing the use of the serum. There had been almost eight months of daily treatment, and the cough, expectoration, and bacilli continued. I suggested to patient that we discontinue the serum for a time, and he very willingly agreed. On June 28, 1898, I asked for a specimen of the sputum for examination to note the condition at close of treatment. To my surprise, I was unable to find bacilli, although the quantity of sputum was abundant. Numerous examinations gave like results. Serum discontinued July 3, 1898. After the bacilli disappeared the sputum rapidly diminished, and finally ceased. The patient's general condition improved each month, and he has since enjoyed the best health of his life. Weight reached one hundred and fifty-eight pounds—a gain of seventeen pounds since beginning the serum. Physical examination fails to reveal any lung lesion; no bacilli; lung expansion, four

inches. His physical endurance is now greater than ever before.

Later.—This patient has recently suffered from a severe attack of gripe, with two relapses, making a good recovery. The sputum was carefully examined throughout this attack, watching for a return of bacilli, with negative results. This evidently was a severe test in a patient who so recently had well-established tuberculosis, and would seem to be strong evidence of a complete cure.

CASE II.—Mr. C., aged twenty-six years; nativity, Pennsylvania.

Family History.—Distinctly tuberculous on mother's side.

Personal History.—Tuberculosis of seven years' standing; in Colorado four years; has had several slight hæmorrhages; experienced slight improvement after coming to Colorado, but not permanent; took no treatment; failing rapidly; as a last resort he decided to try serum.

Physical Examination on beginning Serum.—Greater portion of right lung involved; cavity and râles in this lung; left lung slightly involved; cough troublesome; expectoration moderate; bacilli abundant; appetite and sleeping capacity poor; lung expansion, two inches and a quarter; temperature close to normal; pulse, 100; marked dyspnea and bronchitis.

Began serum September 23, 1897, and continued its use eight months; gained in strength; appetite improved; slept better, and felt much better; dyspnea less; pulse slower; cough improved; bacilli abundant; lungs felt better.

Patient discontinued the treatment and accepted a position; has been employed during the summer and up to present date. This patient had little to hope for when beginning serum. He has not been cured, but his life has been prolonged at least fifteen months, and his present condition is much better than before beginning the serum.

CASE III.—Mr. W., aged twenty-eight; nativity, Ohio.

Family History.—Negative.

Personal History.—College professor; present illness began July, 1895, with cough, which continued. During the spring of 1896 he began to lose weight and strength. He consulted a number of prominent physicians, and his illness was diagnosed tuberculosis; gave up college work; visited Colorado, New Mexico, and California, with periods of improvement, followed by relapses. The case was referred to me in October, 1898.

Examination.—Right shoulder lower than left; right chest sunken; much infiltration and some consolidation of upper lobe of right lung, with evidence of small cavity; fine crepitant râles also heard over apex and central part of upper lobe of left lung. Lung expansion, two inches and three quarters; weight, one hundred and thirty-two pounds; pronounced dyspnea present; afternoon temperature, 100° F.; pulse, 102; cough troublesome, sputum abundant; bacilli present.

Began serum October 18, 1898. A slow but gradual improvement has been made; patient is stronger and looks better; there is also less dyspnea; cough looser; expectoration slightly increased. In other respects symptoms remain much the same as at beginning of treatment; serum continued.

CASE IV.—Mr. A., aged thirty-six years; nativity, Wisconsin.

Family History.—Tuberculous on father's side.

Personal History.—College professor; former health good; had gripe in January, 1891, and also in January, 1892. Dates the beginning of his present illness from last attack of gripe. First actual tuberculous trouble was recognized in July, 1893. At this time had a constant feeling of disease in his lungs; severe cough and considerable expectoration; marked hoarseness; night sweats; bacilli in sputum; spent several months in pine woods in northern Wisconsin. On returning received lighter work in college; health improved; recovered voice; relapsed in fall of 1895; had pleurisy and acute bronchitis, and also cough and expectoration, but not as bad as during first attack. In December, 1896, lost voice again during four weeks.

In August of 1897 went to Salt Lake City and commenced college work; lost at first, then gained slightly; disease increased rapidly during spring of 1898 until July 1st, when he came to Denver and commenced the serum treatment.

Examination before beginning Serum.—Extensive infiltration and consolidation in right lung, chiefly confined to upper lobe; coarse and fine râles; bronchial breathing; small cavity in upper lobe; left lung normal; former weight, one hundred and fifty pounds; weight when beginning serum, one hundred and twenty-seven pounds. During two months previous to beginning serum treatment the average morning temperature was 99.2° F.; pulse, 94; afternoon temperature, 100° F.; pulse, 94. Lung expansion on beginning serum, two inches and three quarters.

The serum has been judiciously administered since July 1, 1898. Throughout the course of treatment the case of this patient has been exceedingly interesting. There have been no radical or sudden changes, but the improvement has been gradual. The character of the expectoration has changed. At first it was dark green and heavy; it is now thinner in consistence, lighter in color, and increased in quantity. Recently the bacilli are enormously increased. Even with the large quantity of sputum, the microscopic field presents the appearance of being a solid mass of bacilli. Notwithstanding this fact the patient is conscious of a constant improvement. In all other respects, except the cough, expectoration, and bacilli, he is practically well. The cough is looser, skin clearer, and he is stronger and feeling better; pulse slower, and there is less fever. He can now sleep on the back without coughing; lung clearing; less dullness; area of infiltration diminishing; lung expansion increased to three inches; average pulse during the last month, 81; temperature close to normal; weight increased eight pounds.

This has been one of the most valuable cases in my report to show the effects of the serum. I have pushed the serum to its physiological limit, and have frequently been obliged to lower the dose. The ultimate results in this case are being watched with much interest. Treatment continued.

CLASS IV. *Acute Cases with "Mixed Infection."* *

As to the fourth class, I have included cases which develop rapidly and tend toward an early termination, with no tendency to become chronic. This rapid tendency may be explained in two ways: First, on the ground of a feeble resisting power of the patient; second, from the standpoint of a high degree of virulence of the bacilli.

Any close student of tuberculosis will observe severe cases in which sputum and bacilli are very scarce or entirely absent, except at intervals. I have observed examples of this type in which the disease was advanced before expectoration appeared in which bacilli could be found, and then not in abundance. These cases have attracted my attention from the fact that they frequently are of a severe type, and the treatment is slow to yield results. In such cases there is also generally a high temperature.

CASE I.—Miss C.; nativity, Minnesota.

Family History.—Negative.

Personal History.—Occupation, stenographer; had been working very hard in a poorly ventilated office during several years; illness first recognized July 15, 1897. Patient sent to Arizona in fall of 1897; came to Denver in spring of 1898; never had hemorrhages; sputum had never been examined.

Examination revealed advanced pulmonary tuberculosis; left lung extensively involved, with cavity; also beginning disease in right lung; patient very weak; night sweats and morning chills; temperature always high—99°–101.5° F.; pulse, 110–120; respiration, 35–40; hectic flush; profound dyspnoea; dry cough; sputum slight in amount; bacilli abundant.

Began serum May 12, 1898. Continued treatment two months; temperature persistently remained high; pulse rapid and weak; in fact, all symptoms of a high degree of infection were present; patient made no progress; on the contrary, the disease was advancing; treatment stopped and patient returned to her home.

CASE II.—Mr. H., aged forty-two years; nativity, Ohio.

Family History.—Tuberculous.

This case in many respects resembles Case I. The patient was in the last stage of pulmonary tuberculosis when serum was commenced; treatment continued two months with no improvement; serum discontinued; patient returned to his home; lived one month.

CASE III.—Mrs. D., aged thirty-seven years; nativity, Pennsylvania.

Family History.—Very good.

Personal History.—Acute tuberculosis developed in the spring of 1897, traced directly to infection; trouble rapidly advanced; came to Colorado one month after the nature of the trouble was ascertained; tried the climate for a few months; disease advanced; used serum for four months, with no improvement; ceased treatment; patient returned to her home; later results not learned.

CASE IV.—Mrs. M., aged twenty-five years; nativity, Illinois.

Family History.—Tuberculous.

Personal History.—In case developed in July, 1893. Came to Colorado in October, 1891; improved; May 1, 1895, returned to Iowa. At the end of two months trouble rapidly developed; confined to bed one month; August 31, 1895, returned to Denver and remained in Colorado. Health moderate until winter of 1897, when evidence of new invasion appeared.

Examination, March 25, 1898.—Right shoulder lower; right side of chest depressed; dullness over greater portion of right lung; large area of consolidation; evidence of small cavity; apex of left lung also involved; afternoon temperature, 99–100° F.; cough and expectoration, bacilli, occasional night sweats, and loss

in weight and strength; menstruation diminished and irregular during six months. Began serum March, 25, 1897; continued four months.

First Month.—Gained three pounds and a half; cough and expectoration less.

Second Month.—Intervals of several days passed with no expectoration; once during second month sputum was tinged with blood. It should be borne in mind that the patient never had a hemorrhage during the five years and a half of her trouble. About the time of the appearance of the bloody sputum night sweats commenced and temperature was frequently higher. The gain made during first and second months was apparently maintained during third and fourth months, but no further progress observed. At close of fourth month a severe hemorrhage occurred without warning. Four days later another hemorrhage occurred, which terminated fatally.

CASE V.—Mr. N., aged twenty-six years; nativity, Michigan.

Family History.—Tuberculous.

Personal History.—Clerk; pulmonary tuberculosis in last stage when I first saw the case. Patient then confined to bed with temperature 102° F., and pulse 125; chills, night sweats, poor ability to sleep, and loss of appetite. After considerable deliberation I decided to begin the serum treatment.

Began serum treatment November 24, 1897; continued five months.

First month, patient made distinct progress; temperature normal much of the time; night sweats almost stopped; feeling stronger and taking daily walks. Under the serum treatment there was a perceptible gain in all symptoms except the cough and expectoration, the cough being looser and the sputum thinner in consistency; bacilli continued abundant. The case was a difficult one, but distinct evidence of beneficial effects was unquestionably obtained. Eight months have elapsed since close of treatment, and patient is in better condition than any time since coming to Colorado. He has maintained the benefits obtained from the serum, and, although not cured, has suffered no further extension of the disease.

CASE VI.—Mr. C., aged thirty years; nativity, Kentucky.

Family History.—Negative.

Personal History.—Physician; felt well up to one year ago; had been overworking; had hemorrhage and was confined to bed six weeks; came to Colorado four months later.

Examination, March 9, 1898.—Apex of each lung involved; much consolidation of upper lobe of left lung, with cavity forming; sputum abundant; bacilli numerous; temperature, 99.5° F.; pulse, 105; weight reduced from one hundred and forty-five to one hundred and thirty-two pounds; chest expansion, an inch and three quarters.

Began serum March 9, 1898; continued two months; very little improvement; weight diminished; temperature remained high; insomnia continued; suffered from severe reactions; tolerated serum rather poorly; treatment discontinued. Patient has remained apparently stationary to date.

CASE VII.—Mr. R., aged thirty-three years; nativity, Ohio.

Family History.—Tuberculous.

Personal History.—Clerk; active tuberculosis developed in spring of 1898. Patient lost weight and

strength; troublesome dry cough developed without expectoration, accompanied by pains in lungs; obliged to give up work; came to Colorado in April, 1898.

Examination, June 17, 1898.—Small area of consolidation in each lung; no cavity; pronounced daily fluctuations of temperature; morning temperature, 97° F.; afternoon, 101° F.; pulse, 100; troublesome cough; very little expectoration; frequently passed several days without sputum. When sputum was produced, bacilli were abundant.

Serum commenced at once and continued for five months. Very slow, but gradual improvement in all symptoms was observed. Patient was unexpectedly called to his home, and was obliged to discontinue the serum. He, however, has continued to improve, and has resumed the serum under his family physician.

CASE VIII.—Mr. H., aged twenty-six years; nativity, Maryland.

Family History.—One uncle died of tuberculosis.

Personal History.—Occupation, engineer; present illness began in 1894; previous health excellent; came to Colorado in spring of 1895; improved; did not consult a physician until spring of 1897, when disease gave evidence of extending. I first saw the patient early in December, 1897.

Examination.—Both lungs extensively involved; cavity in upper lobe of left lung; marked aphonia; temperature, 100.4° F.; pulse, 100; marked emaciation; weight reduced from one hundred and seventy to one hundred and twenty-five pounds; cough troublesome; expectoration abundant; bacilli very numerous.

Began serum December 14, 1897; continued treatment five months. During four months flattering results were obtained. All functions improved; slight gain in weight; temperature and pulse both approached close to normal, notwithstanding the patient was daily employed; serum tolerated well, even in large doses.

During the fifth month evidence of new infection developed; patient became rapidly worse; returned to his home in June, 1898. His relapse was apparently temporary. The beneficial effects of the serum have continued, but without improvement.

I am thoroughly convinced that if this patient could have gone under such a treatment when he came to Colorado two years and a half before, a recovery would have resulted.

Two important lessons may be learned from this case: First, climate alone is not sufficient. Second, cases too far advanced can not hope for a cure, even with climate and serum. Notwithstanding these facts, it is very evident that the serum frequently prolongs such cases indefinitely.

(To be concluded.)

A POWDER BLOWER FOR THE STOMACH.*

By MAX EINHORN, M.D.

Our deeper knowledge of gastric pathology and the better therapeutic results attained nowadays must be ascribed to the new special methods of diagnosis as well as of treatment of the local conditions of the stomach.

Methods of direct treatment of the affected organ

always merit consideration. Several years ago I devised a spray apparatus for the local application of medications to the mucosa of the stomach. This method has since acquired numerous followers here and abroad. By means of the spray, however, only soluble drugs can be applied, but not substances which are either soluble with great difficulty or not at all. In order to facilitate the introduction of the latter I have devised a powder blower for this purpose. The stomach powder blower* (Fig. 1) consists of an ordinary, not too flexible rubber

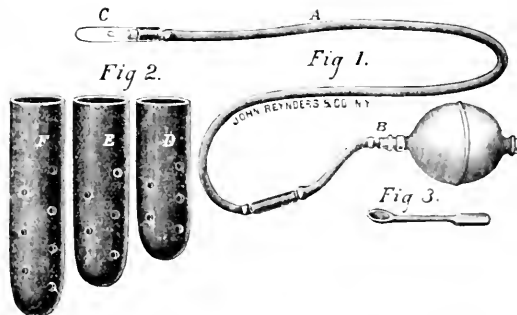


FIG. 1.—The stomach powder blower. A, the tubing part; B, connection with the bulb; C, hard rubber end with screw thread for capsule.

FIG. 2.—(Natural size.) The capsule-shaped powder receptacle.

FIG. 3.—The small spoon for putting the powder into the capsule.

tube (.1), twenty-eight inches and a half long, the distal end of which connects by means of a hard-rubber piece with an air-suction bulb (B), the proximate end of which is attached to a hard-rubber piece (C). The latter is hollow and pierced with several small openings at the side for the passage of air, and provided with a screw thread for the capsule. The capsule (D) has numerous holes, and is made in three different sizes (three, three and a half, and four centimetres long),

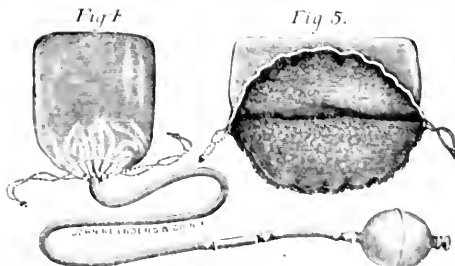


FIG. 4.—A rubber bag with the string, if desired, with the end of the stomach powder blower.

FIG. 5.—The bag opened, the white spots showing the powder.

(Fig. 2). It is filled with the necessary quantity of powder, by means of a very small spoon (Fig. 3), and screwed on to C.

* Demonstrated at the Society of German Physicians of the City of New York, January 27, 1899.

* The stomach powder blower can be obtained at J. Reindess & Co., 303 Fourth Avenue, New York.

Method.—Insufflation of the stomach with powder can naturally only be done when the organ is empty. It should therefore be performed in the fasting condition, and, in cases in which the stomach is not empty in the morning, after previous lavage. Proceed as follows: According to the quantity of medicament required, one of the capsules, *D*, *E*, or *F*, is filled with the powder and screwed on to the apparatus. The tube is moistened with warm water and inserted into the stomach. The bulb is then compressed three or four times in quick succession. By holding the ear over the gastric region of the patient during insufflation the entrance of air (consequently also of the powder) is distinctly heard. In cases in which there is much mucus in the pharynx and œsophagus its entrance into the holes of the capsule may be prevented by covering them with vaseline in a thin layer. The latter forms a protecting covering and prevents liquids from coming in contact with the powder. When the apparatus is in the stomach and the bulb compressed, the air opens up the vaseline layer over the holes, and the powder can now escape.

The following simple experiment shows that the powder does not collect merely at one spot, but rather spreads over the entire surface of the gastric mucosa:

Take a rubber bag (seven inches long and six inches wide), insert the end of the stomach powder blower filled with powder, and draw the strings together (Fig. 4). Then compress the bulb two or three times and remove the insufflator from the bag. If the latter is now opened, the powder is found equally distributed upon the entire inner surface of the bag (Fig. 5).

This shows that the air disseminates the powder as fine dust over all parts of the inside of the bag. In the stomach the conditions are not different from those in the bag, and the insufflation of the interior of the gastric cavity with the powder will thus be complete.

The correctness of this view can also be proved by the Röntgen rays. The stomach is insufflated with bismuth powder and the patient exposed to the X rays.

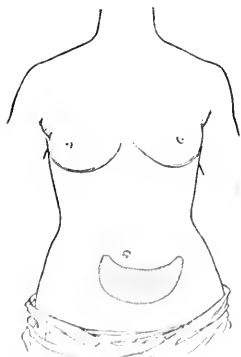


FIG. 6. Fluoroscopic picture of the stomach of Miss C., after powdering with bismuth. Pronounced gastropneuxia.

On examining the gastric region with the fluoroscope the entire stomach is visible as a shadowy figure. This can occur only if the bi-muth powder covers the entire inner lining of the stomach.

Dr. Willy Meyer has been so kind as to place at my disposal the use of his excellent X-ray apparatus, and

I take this opportunity to thank him most heartily for his courtesy.

The following drawing is an exact sketch of the stomach of a patient (Miss C.), as it appeared when fluoroscoped after insufflation of bismuth powder (Fig. 6).

The indications for powdering the stomach are manifold: In ulcer ventriculi, bismuth; in gastric hemorrhages, antipyrine; in gastralgia, orthoform; and in erosion, protargol can be directly insufflated. Insufflation of the stomach with bismuth powder appears also to be of great help in X-ray examinations of this organ. The points just mentioned, and others, will have to be carefully investigated in a large number of cases in order to ascertain their real value. At present my intention has been merely to describe this method of powdering the stomach. At some later period I hope to publish the results therewith obtained.

20 EAST SIXTY-THIRD STREET.

HYDROTHERAPY IN CHRONIC DISEASES.*

By SIMON BARUCH, M.D.,

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DURING the past ten years the methodical application of water in *acute* diseases has received an impetus in this country from which it is hoped there will be no recession.

The movement was inaugurated in this society by a paper on the Cold Bath Treatment of Typhoid Fever, which was read here on February 6, 1889.

Immediately on my return from that meeting I was requested by Dr. Austin Flint to explain to his house staff at Bellevue Hospital the technique of the Brand bath, which he adopted at once.

Since that time it has been warmly espoused by Delafield, Loomis, Peabody, Gilman Thompson, Ball, and Northrup, of New York, J. C. Wilson and Tyson, of Philadelphia, Osler, of Baltimore, and other prominent teachers in these and other cities.

The methodical application of water in *chronic diseases* also received an impulse in this society from a paper read on February 2, 1892, on The Successful Treatment of Chronic Diseases, a Plea for their more Methodical Management.

The utilization of hydrotherapy in chronic diseases was not so rapidly taken up as its use in acute diseases. The reason is plain. Every conscientious physician is guided by his observation at the bedside in forming an estimate of remedial agencies. In acute diseases, like typhoid fever, the patient is visited several times a day or at least once a day, and the treatment is carefully laid down for the guidance of the nurse, who presents a report of all happenings. The behavior of the patient

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during and after the bath is closely observed, and a record made of all symptoms. Thus the physician is enabled to watch the effect of hydrotherapy, and if he has ordered it with precision his results assure him of its value.

Chronic cases, on the contrary, are seen once or twice a week, or less frequently, and there is no intelligent supervision and no reliable report, the patient's report being the chief guide to the effect. Moreover, medication is, as a rule, negative and expectant in acute cases, while in chronic cases it is active and positive, iron and other tonics, iodides, malt preparations, hypnotics, and digestive agents being used in combination with hydrotherapy. The result becomes thus uncertain, and deductions with regard to it are unreliable. Moreover, a positive method like that of Brand is usually understood by the physician because he can obtain its details from textbooks, while upon the hydrotherapy of chronic diseases no instruction is given in our schools, and text-books dismiss it with brief references to cold sponging, etc. The physician comes to regard it as an agent of no importance.

It is my aim to impress upon you, as the result of a somewhat extensive observation in private, hospital, and dispensary practice, that we have in the judicious and methodical application of hydrotherapy a remedial agent of pronounced value, an agent whose action is based on a sound rationale, an agent which may be guided with precision, and which may therefore be utilized in the most unpromising cases. That water may claim your earnest attention, it is meet and proper that you be convinced of the rationale of its action.

In the time at my disposal a brief glance at this important point must suffice. If we bear in mind the enormous vascular and nerve terminals of the skin and their intricate connection with the cardiac and cerebro-spinal centres, and if we reflect but a moment on the fact that the latter govern the entire human economy, it at once becomes as clear as day that we hold the key to the situation if we can find an agent which can powerfully affect the blood and nerve supply of the skin. That we possess such an agent in water I do not ask you to accept until you are convinced of its rationale.

Water exerts its action on the skin by its mechanical and thermic action—i. e., as a conveyor of excitation and depression. It is a trite physiological fact that cold contracts smooth muscular tissue and that warmth relaxes it. When cold is applied to the skin, the latter contracts, forming cutis anserina; if the application is prolonged, the cutaneous arterial capillaries are contracted, while the venous are unaffected; the result is the well known cyanotic appearance.

If the application is still more prolonged, necrosis of the tissues, by reason of the deprivation of the vascular supply, is produced; we have frost-bite.

If the application of cold to the skin is brief, the contraction of the arterioles is evanescent and the con-

traction gives way to a tonic dilatation, called reaction, which heightens the vitality of the part.

Similar results are obtained by heat.

Both are cutaneous irritants whose effects are conveyed to the skin through the medium of water in the practice of hydrotherapy.

Water has become popular for this purpose by reason of its great capacity to take up heat and cold and give them off again in the solid, liquid, and gaseous forms. This quality renders it a flexible therapeutic agent which may be applied by various methods to a portion of the body or to its entire surface with varying temperature and pressure and for longer or shorter periods.

Thus we have in the temperature, pressure, and the duration of hydropathic procedures opportunities for utilizing water for various conditions, and so modifying its effects that surprising results may be obtained.

As an illustration let me refer to an ordinary case of syncope from emotional causes. The dash of water on any sensitive surface of the body arouses the patient to consciousness. In a more profound condition, such as opium poisoning, more active procedures, such as a douche or affusion, would be required to produce this effect.

In both instances the rationale is the same: a shock and reactive stimulus to the cutaneous nerve terminals, which is carried on motor tracts to the brain and thence reflected through the pneumogastric nerve to the lungs, deepening respiration, and to the heart, increasing cardiac action.

Upon the utilization of this principle, upon this rationale, is based all the clinical value of external hydrotherapy.

Thermic and mechanical action upon the skin produces positive and readily ascertained effects upon the heart, influencing its action in a positive manner. It can be definitely foretold whether the pulse will be accelerated or slowed, whether it will become more tense or more feeble. Changes in the size of the vessels can also be positively effected; contraction or dilatation by heat or cold, with accompanying increase or diminution of their tone, may also be distinctly anticipated and accomplished. Alterations in the corpuscular elements of the blood itself and in its hæmoglobin have been demonstrated by exact experiments, many of which I have personally conducted. That these results must be far-reaching in many diseased conditions is self-evident.

Since most so-called inflammatory processes have as a pathological basis a disturbed circulatory condition, with changes in the vessel walls and in the corpuscular elements of the blood, and inasmuch as these pathological conditions may be removed by restoring normal circulatory conditions, by hydrotherapy, we have in the latter a remedial agent of great potency in the more common cardiac, circulatory, and vascular diseases.

Physiological experiments, as well as clinical obser-

vation, have positively demonstrated that secretion and excretion, dependent as they are on the circulation, may be enhanced by restoring the latter when disturbed. Hundreds of records have shown that in infectious diseases, like typhoid and pneumonia, for instance, not only is the quantity of urine enormously increased by judicious hydrotherapy, but the urotoxic coefficient is doubled or trebled. The elimination of urea and uric acid, too, has been found by Alois Strasser to be greatly increased in healthy and diseased individuals.

These being well-ascertained facts, the so-called dyscrasic diseases, like gout, rheumatism, diabetes, and syphilis, must be favorably influenced by hydrotherapy.

We have the testimony of that renowned teacher of therapeutics, Professor Semmola, of Naples, that "hydrotherapy excites cutaneous activity and with it all functions affecting tissue change and organic purification, so that frequently real marvels of restoration in severe and desperate cases have been obtained by it."

In a paper read before this society on February 6, 1892, I ventured to state that "in many chronic diseases it has proved so successful after failure of medicinal agents that no case should be yielded up as hopeless until hydrotherapy in some form has been tried."

Seven years have elapsed since this statement was made, and it may be conscientiously reiterated to-day by reason of my observation in numerous cases which have been referred to me by colleagues after disappointment with the best therapeutic methods.

Time does not permit the discussion of the details of technique and methods to be adopted in such cases. A few illustrations must suffice.

A case of chloro-anemia, for instance, which has resisted iron, strychnine, malt, digestives, etc., often assumes a different aspect when the neurovascular discipline produced by the following treatment is secured. In such a case a mild procedure should be adopted.

The room being warm (70° F. or more), the patient should stand in a tub of water at 100° F. and receive rapid ablutions with water at 80° F., small quantities being used in the beginning to avoid chilling.

Friction with a wash rag or bath glove during the ablution aids reaction. The temperature of the water for ablutions should be lowered every day and larger quantities should be applied; the duration should be prolonged also, but decided chilling should always be avoided.

The patient's statement that she feels cold must not be our guide. Chattering of teeth, cyanosis of the nails, and insufficient warming up after the procedure indicate that the reactive capacity of the patient is not adequate.

It is a very common error to increase the temperature of the bath water when the reaction is feeble. Warmer water would *diminish* reactive capacity. Under these conditions the extent of surface treated should rather be diminished. The water should be applied on

the back alone very rapidly and with good friction. The patient should be dried and made to warm up by exercise. The temperature of the bath water may be lowered one degree each day, and the extent of surface proportionately increased. When the patient is able to bear ablutions of 60° F. over the entire body, *affusions* may be substituted with advantage.

A basinful of water at 80° F. may be thrown with some force upon the back for two successive days. Two basinfuls may now be applied and the temperature lowered two degrees. This having been done on two successive days, a basinful on the chest may be added, then two, and so on.

The number of basinfuls may be increased to six, always avoiding chilling. When a temperature of 60° F. is reached by this gradual daily lowering of the bath temperature, the treatment will have produced its legitimate effect. The inspiration is deepened, the pulse is less frequent and more tense, the percentage of hæmoglobin and the number of red cells in the blood drawn from the surface are absolutely increased.

These effects of increased oxygenation may be greatly enhanced by following the treatment with exercise in the open air. The pallid lips assume a brighter hue, the languid eye brightens, the step is lighter, and appetite and assimilation are improved because of the enhanced circulatory conditions in the gastro-intestinal mucous lining.

Another type of cases which I see quite often is in that trying class of neurasthenics who wander from one doctor's office to another, and sooner or later become the prey of charlatans and Christian Science faddists.

These patients present every phase of depreciated vascular and nerve condition. They look wan and worn from loss of appetite and sleep, digestion is impaired, and introspection renders them and all around them miserable.

Such a case has probably once been benefited by treatment, rest cure, change of air and scene, but he returns to his unfavorable environment and gradually but surely all his old symptoms return. He again finds himself tottering on the brink of invalidism; now he believes his reason threatened, his memory weakened; he is the prey of morbid fears; he becomes the despair of family, friends, and physician. What prospect is there for such a case?

I can say from actual observation that if such a patient be subjected to a methodical course of hydrotherapy the result will prove a revelation, provided there is no organic basis for the malady. The mild procedures indicated above may not meet all the indications of this type of cases, although they may be useful as an introduction to more positive treatment.

Douches adapted with regard to temperature, duration, and pleasure to each individual case play the most important rôle here. These are capable of arousing the dormant neurons, enhancing vascular activity, and im-

proving general and local nutrition. The cortical centres, which are the chief points of failure in these depressed neurasthenics, feel the impulse of a better circulation and nutrition. The morbid ideas and illusions vanish. The hypochondriacal introspection ceases, and the patient slowly but surely regains his neurovascular equilibrium. The results of hydrotherapy in such cases are far more enduring than those following other methods in my experience.

Another set of cases which are greatly benefited by hydrotherapy are those unsatisfactory rheumatic, gouty, and lithæmic conditions and adiposity which are the bane of the doctor's life, and which we are often so glad to get rid of by sending the patients to the hot springs. At these resorts many remarkable cures are effected, by removal of the patient from unfavorable environment and by the judicious application of baths and douches under the direction of their skillful physicians. Unhappily, few of our patients are able to leave their homes for this purpose, and for these much may be done by methodical hydrotherapy at home. The course adopted at these springs may be usefully imitated wherever douches under pressure of twenty to thirty pounds can be had. The patient receives a full bath of 100° to 105° F. for five to ten minutes, during which gentle massage is given in the vicinity of the crippled joints. After this he is laid on a warm cot, covered with several blankets, and made to perspire for a specified time. He is then well dried and rested.

The value of this treatment is much enhanced at the springs by alternating or succeeding it with douches over the entire body, except the chest and abdomen, the temperature of the douche water being 101° to 108° F.

These douches should also be followed by rest under warm blankets for a half hour or longer. This treatment stimulates the emunctories, especially when it is combined with the *abundant* and *methodical* drinking of water. Products of retrograde tissue change are eliminated; normal products are formed. Although the patient may lose flesh, his appetite, sleep, and general *bien-aise* are increased, and if the dietary and mode of life are properly regulated his health may be entirely restored. While we can not approach the rapid and decided effects attained by our colleagues at the hot springs, to whom such cases should preferably be referred, great relief may be afforded and even complete restoration may be slowly attained by the hot douche and bath treatment at home.

If there are medicinal agents which are capable of producing similar effects, I have failed to discover them during an active professional life of thirty-seven years. Far be it from me to deprecate the pharmacopœia, but I have arrived at the stage of which that wise therapist, the late Alfred L. Loomis, once said in the Academy of Medicine, "Physicians prescribe less medicine as they grow older." This truth is realized by every con-

scientious practitioner, who becomes convinced by increasing observation of the inadequacy of medicinal remedies when unaided by those hygienic agencies which maintain health and restore it when lost. Among the latter the judicious use of baths has stood preeminent since the days of Hippocrates.

When the simple procedures mentioned above, and which are more fully described in works on hydrotherapy, do not suffice to produce satisfactory results, resort to institution treatment becomes imperative.

Fortunately, there are several institutions in the country where systematic hydrotherapy is administered under medical direction.

My personal experience with hydrotherapy in chronic diseases extends over a period of ten years and embraces over a hundred thousand recorded procedures in neurasthenia, hysteria, some of the psychoses, phthisis, gout, rheumatism, dyspepsia, cardiac diseases, sciatica and other neuralgias, obesity, and neuritis.

The application of this method of treatment to such varied diseased conditions is rendered possible by its flexible nature, which enables us to adapt it by modifications of temperature, pressure, and duration, and numerous technical details to the most varied pathological manifestations, provided the physician has mastered its rationale and mode of action, and its details are not left to the judgment of bath nurses.

My confidence in the value of hydrotherapy in chronic diseases, borne out by actual clinical observation, is confirmed by the most noted clinicians of the present day. The writings of Leyden, Kussmaul, Ziemssen, Erb, Nothnagel, Senator, Charcot, and Krafft-Ebing, and those of Draper in our own country demonstrate that I have not given it undue credit. Indeed, to the marvelous results of hydrotherapy in intractable chronic diseases is due the establishment of numerous institutions in Germany which are run by masseurs, bath nurses, priests, and others. These are unhappily bringing hydrotherapy into the same disrepute which has often been caused by similar espousal in its past history. In New York city also, several institutions of this kind have sprung up under the management of such people, whose knowledge of hydrotherapy is in inverse ratio to their claims. The medical profession may well heed the warning against these pronounced by Brehmer, the father of modern phthisis treatment: "The douche is a dangerous remedy, which should always be given under the supervision of a physician, never by bath nurses alone." And Dr. Draper says: "Its best results require the appointment of a well-ordered establishment, where all the various methods of applying water can be wisely and skillfully directed."

By utilizing only institutions which are under the supervision and direction of a colleague, the physician may obtain all the valuable effects of hydrotherapy for his patients, without subjecting the latter, or himself, to the dangers of its empirical application, which has so

often brought disaster and discredit to this remedial agent.

If water is to occupy a lasting position among remedial agents, a place from which the whims and fancies, the prejudices and passions of coming generations shall not again displace it, it *must remain in the hands of medical men entirely*; its theory and technique must be taught in our schools, and its application demonstrated in our hospitals. The latter is now done in some of the best medical schools of Europe. In Vienna, Professor Winternitz has a clinic and delivers a regular course of lectures on hydrotherapy. In Heidelberg, Professor Vierordt has also established a hydrotherapeutical clinic. In the Berlin University Clinic, Professor Leyden also dwells upon hydrotherapy with much emphasis. The great teacher Kussmaul has recently pointed out the crying need of instruction in this branch of therapeutics. Agitation in favor of making it a regular subject for instruction in our universities has also been begun in the German Parliament. Only by this means will water be rescued from the hands of the quacks and empirics, who thrive upon it to the detriment of the educated practitioner. Witness the crowds of people who fifty years ago flocked to Graefenberg from all parts of the world to be treated with water by the ignorant peasant Priessnitz. Very recently history has repeated itself in the great fame attained by a priest, Father Kneipp, who successfully imitated Priessnitz in the enormous congregation of sick people whom his water cures attracted to Woerishoefen.

Such incidents must lower the medical profession in the estimate of people whose faith in medical learning and skill is rudely shaken by the cures accomplished by a layman after failure of the physician. Is it not clear that if these lay people, who know nothing of the rationale of water and who practise hydrotherapy in the most mechanical fashion, can accomplish so much, the educated physician must achieve far greater results if he has been properly instructed in the technique and rationale of hydrotherapy?

Let me therefore impress upon those of my hearers who are connected with medical schools the need of adding this method of treatment to the practical curriculum.

51 WEST SEVENTIETH STREET.

Therapeutical Notes.

Rhus Aromatica in Nocturnal Incontinence of Urine.—Freyberger (*Treatment; Canada Medical Record*, December) reports a number of cures by means of the fluid extract given in doses of from five to twenty minims, with twice as much aromatic syrup and six times as much distilled water, three times a day. In several instances a temporary aggravation of the trouble,

lasting from four to six days, took place during the first week, but subsided somewhat abruptly.

A Mixture for Dyspepsia.—The following formula is given in the *Riforma medica* for January 25th:

R Pepsin 150 grains;
Hydrochloric acid 15 “
Syrup of bitter-orange peel... 1,800 “
Distilled water, enough to
make 4,500 “

M. S.: A coffeespoonful before dinner and before supper.

A Mixture for Tympanites in Infants.—In the February number of the *Revue mensuelle des maladies de l'enfance* we find the following formula credited to Freyberger:

R Sodium sulphocarbolate.... 4 to 8 grains;
Syrup of bitter-orange peel.... 75 “
Distilled peppermint water.... 375 “

M. S.: A coffeespoonful three times a day for two days.

White of Egg as an Application in Cutaneous Inflammations.—Dr. S. Lewith (*Archiv für Dermatologie und Syphilis*, xliii, p. 441; *Centralblatt für Chirurgie*, March 11th) recommends coating eczematous, erythematous, and other inflamed cutaneous areas with white of egg. It is soothing and slightly compressive, and is readily removed.

Ichthyol in the Treatment of Chronic Bronchitis.—Dr. Le Tanneur (*Bulletin médical*, January 24th; *Indépendance médicale*, March 8th) reports having cured cases of many years' standing with ichthyol given internally in daily amounts of not less than half a drachm. He thinks it should be administered in such a form as to reach the intestine without having been freed in the stomach—namely, in gluten capsules.

A Prescription for Neuralgia.—The March number of the *Centralblatt für die gesammte Therapie* takes the following formula from the *Clinica medica*:

R Extract of cannabis indica..... 7½ grains;
Salicylic acid..... 75 “

M. Divide into five powders. Two or three to be taken daily.

An Antiseptic and Antiphlegmonous Inunction.—The *Centralblatt für die gesammte Therapie* for March attributes the following formula to O. Werler:

R Credé's colloid silver..... 5 parts;
Lanolin 50 “
Vaseline 25 “

M. The skin of one half of the body is to be rubbed with the ointment every twenty or thirty minutes in cases of acute phlegmons and furuncles.

Phosphate of Copper in the Treatment of Tuberculosis and Chlorosis.—*Progrès médical* for March 4th ascribes the following to Luton:

R Neutral acetate of copper..... 1½ grain;
Crystallized phosphate of sodium 3 “
Licorice and glycerin, enough to make one pill.

M. Two such pills to be taken daily.

R Phosphate of copper..... 15 grains;
Pure glycerin, 1 of each..... 37½ “
Distilled water, 1

M.

To be used in hypodermic injections (dose not stated).

Salicylized Gelatin in the Treatment of Eczema.—The *Riforma medica* for February 3d attributes the following formula to Schreimser:

R	Salicylic acid,	{	each.....	10	parts;
	Glycerin,				
	Gelatin,	{	each.....	30	“
	Water,				

The gelatin is to be dissolved with the aid of heat, and the solution applied to the eczematous vesicles.

A Pill for Aortic Palpitation.—The *Riforma medica* for February 10th gives the following formula:

R Quinine hydrobromide 60 grains;
Powdered digitalis, {
Extract of convallaria, { each . . . 45 "

M. Divide into forty pills. From two to four to be taken daily.

A Liniment for Herpetiform Dermatitis.—The *Gazette hebdomadaire de médecine et de chirurgie* for March 9th attributes this formula to Eliot:

R Ammonium sulphiechthyolate, }
Oil of sweet almonds, } ..equal parts.
Limewater, }

M. To be rubbed upon the affected part several times a day.

Formoform.—The *Riforma medica* for March 6th gives the following formula for formoform, which it says is useful for sweating of the feet:

B Formaldehyde	13	parts;
Thymol	10	"
Zinc oxide	3,444	"
Starch	6,627	"

M.

A Paste for the Acne of Young Persons.—The *Riforma medica* for February 25th gives this formula as Veiel's. It differs from a paste that has long been in use chiefly in the substitution of mucilage for glycerin.

B) Mucilage of gum arabic	6 par
Sublimed sulphur,	} each 20 "
Alcohol,	
Water.	

M.

An Injection for Vaginal Gonorrhœa.—The *Progrès médical* for March 11th gives the following as Lutaud's formula:

Alum,	℥ each	150 grains;
Sodium borate,	℥	"
Quinine sulphate	℥	15 "
Carbolic acid,	℥ each	30 drops;
Oil of thyme,	℥	"
Glycerin	℥	6½ ounces.

M. A soup-spoonful, in a quart of hot water, to be injected into the vagina two or three times a day.

Clay as a Dressing.—Langemak (*Münchener medicinische Wochenschrift*, 1899, No. 4; *Gazzetta degli ospedali e delle cliniche*, March 9th) recommends clay as an application to eczematous surfaces and superficial ulcerations, in the form of a paste made according to this formula:

B Clay,	1	each	..	..	1	part.
Glycerin,	1	..	..	..	..	..
Yinseline	2	parts.

M. The clay is first sterilized by means of heat and then finely powdered.

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THE CARE OF THE SICK POOR IN LARGE CITIES.

THERE is need, we think, of a *juste milieu* between what seems to be desired by the shriekers about the abuse of medical charity, on the one hand, and, on the other hand, the continuance of the present state of things, which is favored by the opposite extremists. Pending the dawn of the millennium, we do not look for any arrangement that will be wholly acceptable to everybody, but we do hope for one that in the main will be acceptable to all reasonable people. A plan that is equitable in its principal features, so far as we can see, has been formulated by a physician who has had several years' experience in New York practice, and we learn that it is that gentleman's purpose to submit it to the legislature, in the form of a bill which he has already drafted, provided he finds that it meets the views of the profession.

Substantially, the features of the project are as follows: The State board of health is to divide cities of the first class into districts of not more than fifty thousand inhabitants. For each of these districts a physician for the poor shall be appointed, after a competitive examination, to hold office for three years, at an annual salary of not less than \$2,500 or more than \$3,000. The bill does not debar him from pursuing his private practice during his incumbency of the office. He must be a legally qualified practitioner who has resided in his district for at least five years, a member of some medical society in good standing, not connected with any dispensary or hospital, and having a recommendation from at least two regular physicians residing in his own district. He is to give his professional services free of charge to the sick poor of his district, to persons injured and requiring immediate medical aid, and to those to whom the police may summon him. To persons who may require or wish to be treated by a specialist in a dispensary or hospital he may issue cards entitling them to free treatment in such an institution, but may refuse cards to persons known to him to be able to pay for the necessary attendance. He is to keep a record of patients treated by him in his official capacity, and make annual reports to the State board of health. Besides doing all these things, he is to act as an exam-

ining physician for the district attorney in cases of sudden death.

It is only a rough draft of the bill that we have seen. We repeat that in the main it commends itself to our judgment, but we recognize that it will have to be modified materially in several of its features, and made more explicit in others, before it will be quite acceptable to either the legislature or the medical profession. For example, it contains a section which forbids the hospitals and dispensaries to treat patients indiscriminately without charge. We presume the institutions that are supported entirely by the public funds are the only ones meant, but it is not so stated; manifestly the State has no power to restrict the benefactions of other hospitals and dispensaries. In the next place, we presume there are many members of the profession who would think it more fitting that the medical officers provided for in the bill should report to the State board of charities than to the State board of health. Further, we should object decidedly to disqualifying a physician because of his holding a hospital or dispensary appointment; in fact, we think a hospital or dispensary physician would, *ceteris paribus*, be better fitted than any other to attend the sick poor. Next, we object to compelling this official to attend in cases of accidents; the police surgeons are already charged with that service, and the bill does not aim to legislate them out of office. Finally, we understand that one of the intents of the bill is to do away with the coroner system. That is a consummation devoutly to be wished for, we admit, but one that probably can not be reached for many years to come, for, as we understand it, the office of coroner can not be abolished without amending the constitution of the State; and, if it could be, why replace the present efficient service of the coroner's office—leaving the system out of account for the moment—by the services of a physician willing to undertake such responsibilities, in addition to attending the poor, for the paltry remuneration of \$2,500 or \$3,000 a year?

The consideration of economy is urged in support of the measure. This seems to us illusory. Not only, as we have said, would there be no doing away, at least for the present, with the great expenses of the coroner's office, but the city health board's corps of summer physicians is not abolished in the bill. Therefore these two expected items of saving would not be realized. Moreover, the author of the bill estimates the expense upon the basis of a division of the city of New York into thirty districts. As a matter of fact, there would have to be seventy or thereabout.

On the other hand, it has been said that the medi-

cal profession of the city is opposed to free attendance upon the poor in their homes. We do not believe that that opposition, if it exists at all, is considerable; certainly it is not intelligible. Which man is in the greater danger of becoming a pauper, he who calls a public physician to attend a member of his family in the family home, or he who makes his first visit to a public resort of paupers, to become by contagion one of their number?

THE CHICAGO HEALTH DEPARTMENT'S MANAGEMENT OF INFECTIOUS DISEASES.

We are indebted to the department for advance sheets of its forthcoming *Bulletin*. They show extraordinary energy and vigilance, coupled with much ingenuity, in dealing with such diseases as diphtheria and scarlet fever, and they account amply for the department's unexampled success in the antitoxine treatment of diphtheria. It seems that whenever a case of sore throat is reported as occurring in a poor family, word is sent by telephone at once, by night as well as by day, to the nearest disengaged medical inspector, who visits the patient immediately. If he finds that the symptoms point to diphtheria, he administers the antitoxine on the spot, without waiting for a bacteriological confirmation of the diagnosis. "The patient, rather than the disease," says the report, "receives the benefit of the doubt." Nevertheless, before leaving, and before the use of any antiseptic or other application to the throat, he inoculates the culture box and smears a microscope slide with mucus from the affected part or places on it a bit of false membrane if there is any. By this means the bacillus may often be identified without the delay required to incubate the specimen.

Stress is laid on the administration of the antitoxine "in full strength and quantity" in every case that warrants the suspicion of diphtheria. Experience has shown that the initial dose should range from two thousand to three thousand units, the former in a bulk of five cubic centimetres, and it is said that the inspectors' maxim has come to be "Inject early and enough." Removing the patient to a hospital is not recommended by the department, and its results abundantly justify it in maintaining that a patient's chances are better if he is kept in his own home, no matter how squalid it may be, than if the delay of transportation to a hospital is incurred. Whenever, for any reason, the removal to a hospital is decided upon, an antitoxine injection is given at once, unless it is forbidden by the family, a common occurrence in the early days of the antitoxine treatment, but a rare one now.

An expedient that is novel, so far as we know, has

been tried by the department to take the place of placarding dwellings in which there is infectious disease. Handbills headed "Warning!" with blanks for the date and the name of the disease, announce that there is such and such a disease in a neighborhood, urge upon parents to find out what family it is that is afflicted, and give information concerning suspicious symptoms. The handbill is printed in English, but the German, Italian, Polish, and Yiddish equivalents of the word warning appear on it in large letters, reliance being had on the curiosity of persons who can not read English to secure a translation. These handbills are distributed in ten or more neighboring houses, given to janitors of apartment houses and especially to children, who are always eager to "spread the news," and affixed to police-patrol boxes, telegraph poles, etc., and to the fences of the nearest school buildings. This experiment is said to promise success. The idea of it is to place the responsibility upon the persons chiefly interested, that is to say, parents.

HERDMAN'S AND BOYCE'S RESEARCHES INTO THE NORMAL AND PATHOLOGICAL HISTOLOGY AND BACTERIOLOGY OF THE OYSTER.

THE supposed connection of the oyster with infective disease prompted Professor Herdman, F. R. S., and Professor Boyce, M. B., to a series of researches which have now been carried on intermittently for a period of three years. The *Proceedings of the Royal Society* for February 16th contain an abstract of their interesting paper which was read before the Royal Society on January 19th.

The "greening" of oysters was fully studied by them, and their opinion is that there are several causes and distinct kinds of greenness in oysters. Of these, some kinds are innocuous, as is the case with the green Marennes oysters so highly prized by epicures, and those of some rivers in Essex on the east coast of England. American oysters rebedded on the English coast, and Falmouth oysters native to England, suffer, however, from noxious forms of greenness; the former, according to the authors, being due to a pale-green "leucocytosis," certainly associated, they say, with a greatly increased amount of copper in the oyster, which mineral is also responsible for the toxic nature of the green Falmouth oyster. On the other hand, the greenness of the Marennes oyster was found not to be due to copper, but to a special pigment which they term "marennum." The green oysters of this latter variety, moreover, are not found to contain any excessive amount of iron over that found in the white varieties; nor do their greener por-

tions—*e. g.*, the gills, palp, etc.—contain more iron than the colorless parts.

On the other hand, the authors find by quantitative analysis that the green American oysters, and also the Falmouth oysters, do contain more copper than the colorless ones, and more proportionately in the greener parts than in those that are less green, and they therefore conclude that this variety of greenness is due to copper. This copper in the American oysters appears to be stored up in noticeable amount in the leucocytes, constituting a "green leucocytosis"; while in the Falmouth oysters it is mechanically attached to the surface of the body in a form insoluble in water, probably a basic carbonate. The feeding of oysters with weak solutions of various copper and iron salts gave negative results.

As to the bacteriology of the oyster, the authors failed to find the *Bacillus typhosus* in any oysters obtained from the sea or from markets. Inoculation with that organism, however, enabled them to recover it from the body of the oyster up to the tenth day.

Sea water appeared to be inimical to the growth of the bacilli, for infected oysters washed in a stream of clean sea water presented a diminution or total disappearance of the microbe in from one to seven days.

The colon group of bacilli is said by the authors to be frequently found in molluscs, especially oysters, sold in towns, but they have no evidence that it occurs in them while living in pure sea water. An anaerobic spore-bearing bacillus possessing the characteristics of the *Bacillus enteritidis sporogenes* of Klein was also found. These researches are valuable as indicating the necessity for a thorough sanitary regulation of oyster beds.

THE AMERICAN MEDICAL ASSOCIATION AND THE PRESIDENT OF THE UNITED STATES.

INASMUCH as the next meeting of the association is to be held in Columbus, the capital of the president's own State, and inasmuch as medico-military matters are likely to be quite prominent at the meeting, we readily fall in with a suggestion we have heard made to the effect that it would be graceful for the association to invite Mr. McKinley to be present.

ARMY EXAMINATIONS AND THE NEW YORK STATE LICENSE.

WE are indebted to the *Buffalo Medical Journal* for an advance proof of an article for its April number in which it is clearly shown that it would be pernicious to exempt from the State examination men who served as medical officers during the war with Spain, which is said to be the purpose of a bill now before the legislature. The specious argument had been advanced that, inasmuch as the army examination was very exacting, those who had passed it should be *ex officio* entitled to the

State license, but our contemporary points out that, while the examination for admission into the medical corps of the regular army is of that character, volunteer medical officers who served during the war were as a rule not subjected to any such rigid tests or in many cases to any at all. We may add that in our opinion exemption for any reason whatever is at variance with the spirit of the law governing the issue of the State license.

THE DANGERS OF ORGANOTHERAPEUTIC REMEDIES.

IN our issue for March 25th we referred to the recommendation by the French Academy of Medicine of the control of the sale of thyroid preparations. According to the *Lancet* for March 11th, it would appear that the Austrian government has already taken this matter up, and has prohibited the sale of organotherapeutic remedies save when prescribed by a practitioner. This action is stated to be due partly to the increasing indiscriminate use of such preparations by the laity, and partly to the fact that the absence of chemical tests for organic remedies renders it difficult to prove whether such preparations really contain the medicaments alleged. There can be no doubt that some precautions are as much needed to control their use as with other dangerous drugs.

A WOMAN DOCTOR OF PHILOSOPHY.

ACCORDING to the *Lancet* for March 11th, Fräulein Neumann has the honor of being the first woman to attain to the degree of doctor of philosophy in the Berlin University, having successfully defended her thesis. Slowly but surely throughout the Old World the women are winning their way to recognition, as they have long ago done in the New.

THE TRANSPORTS GRANT AND SHERMAN.

THE *Army and Navy Journal*, in its issue for March 18th, announces the great satisfaction felt by army officers at the freedom from severe illness of the troops taken to Manila on the *Grant* and *Sherman*. It declares that they are the finest transports ever sent abroad with troops, and no better provision was ever made for the care and comfort of soldiers on a long voyage than on those vessels. It is gratifying to learn this from so well-informed a source.

A PROPOSED MEMORIAL OF PROFESSOR BREISKY.

SHORT as the time is which is to elapse before the 25th of May, the tenth anniversary of Breisky's death, we do not doubt that subscriptions will be received in sufficient amount to provide for the proposed memorial, a medallion portrait or bust of the dead obstetrician, being installed in the Prague Lying-in Hospital. The committee's appeal for such subscriptions appears in the *Centralblatt für Gynäkologie* for March 18th. Contributions may be sent to Dr. Oscar Piering (Prag II., Stadtpark).

AN INGENIOUS PLEXIMETER.

IN the February number of the *Physician and Surgeon* Dr. Emil Amberg describes and figures an invention of his, the ring pleximeter, that seems to us likely to prove very handy for facilitating percussion in the

hands of those who prefer to use a pleximeter. It is made to fit the second joint of the forefinger, and resembles a broad finger ring, save that its dorsal aspect presents a plane surface to receive the tap of the percussing finger. We can see that it would readily adapt itself to the intercostal and other depressions of an emaciated subject.

THE CITY BOARD OF HEALTH AND THE ANTITOXINE TRADE.

AS our readers know, there is a bill before the legislature the object of which is to stop the trade of the city board of health in diphtheria antitoxine, vaccine, etc. The question is entirely one concerning commercial interests, and not, as a number of hospital physicians and surgeons who are now protesting against the enactment of the bill seem to have been led to suppose, one with which any fancied crippling of the board in its legitimate work is connected. Let the board have as large an appropriation as may be necessary for the care of the sick poor, but let it keep its hands out of trade, which is all that the bill demands.

THE HAIRPIN IN MINOR SURGERY.

THERE must be few practitioners of any considerable fertility of resource who have not at times found themselves able to accomplish a good deal by the employment of hairpins. Dr. M. Eberson (*Zeitschrift für Krankenpflege*, 1899, No. 1; *Klinisch-therapeutische Wochenschrift*, March 5th) enumerates some of the uses to which the hairpin may be put, such as for the extraction of small foreign bodies from the nose, etc., for curetting exuberant granulations, for stopping hæmorrhage from a wounded artery, and the like. Various other uses of this omnipresent article will readily occur to a man of ingenuity.

PAPER MONEY AS A VEHICLE OF INFECTION.

THE *Gazzetta degli ospedali e delle cliniche* for February 14th calls attention to the fact that a Brussels bank disinfects its soiled notes, and commends the practice followed by the Bank of England of destroying all of its notes that find their way back to the bank. We think our own government would be taking a step in the right direction if it were to follow such a course, though we are not prepared to maintain that serious infection by means of paper money is a very common occurrence.

THE ANTITOXINE TREATMENT OF DIPHTHERIA.

DR. ALFRED E. HARRIS, medical officer of health for the parish of St. Mary, Islington, London, in his quarterly return for the fourth quarter of 1898, says that the mortality in diphtheria cases has been reduced to twelve per cent. He adds: "To the antitoxine treatment of the latter disease the very considerable reduction which has latterly occurred in its fatality has been generally ascribed." In support of this view he quotes the percentage of fatal cases for the three years 1892 to 1894, inclusive (the pre-antitoxine period), with that from 1895 to 1897, inclusive (the antitoxine period), from two important classes in the Metropolitan Asylums Board's hospitals—viz., the entire case mortality, and the mortality in children under five years of age. He also contrasts the mortality with and without antitoxine

in laryngeal diphtheria, whether operated on or not, and the mortality under like conditions in cases of laryngeal diphtheria where tracheotomy was performed. In the first class of cases a steady reduction had occurred from 30.4 per cent. to 17.6 per cent.; in the second, from 53.5 per cent. to 24.9 per cent.; the third showed a recovery rate of 66.3 per cent. with antitoxine, as against 38 per cent. without; and the fourth, a recovery rate of 56.4 per cent. with antitoxine, as against 29 per cent. without. Surely such figures must carry weight with all unprejudiced persons.

ECZEMA OF THE HANDS.

It is well known that one of the great drawbacks to the successful treatment of eczema of the hands is the frequency with which the hands are washed. Dr. Unna, of Hamburg (*Monatshfte für praktische Dermatologie*, xxvi, 11; *Centralblatt für Chirurgie*, March 11th), recommends that they be thoroughly washed only once in twenty-four hours, at bedtime, and then immediately coated with some fatty substance, especially a pyraloxin ointment. At other times they may be washed with oil.

THE TERM SYCOSIS.

THE most that can be said in favor of retaining this old term—expressive only of an appearance which is not commonly met with in the disease—is that dermatologists know what they mean when they use it. Others, however, do not always understand what is meant, and we think a more suitable name would be dermatitis barbae, as suggested by Dr. Regensburger, of San Francisco, in a very interesting article published in the *Journal of the American Medical Association* for March 11th.

THE OPERATIVE STERILIZATION OF WOMEN.

IN our issue for January 28th we referred in an editorial on The Sterilization of Women to Professor Spinelli's operation for that purpose. Dr. H. Rose (*Centralblatt für Gynäkologie*, 1898, No. 45; *Post-graduate*, March, 1899) describes a measure which, he says, is applicable in abdominal and vaginal celiotomy, seems certain of effect and easy of execution from a technical point of view. It is the wedge-like excision of the tubes from the uterus. Where the Fallopian tube is inserted into the substance of the uterus it is seized and traction made upon it. A small elevation is thus produced at that point; and below the point where the excision is to be made three provisional sutures are placed. Then a wedge-like piece is excised with curved scissors; the rapidly tied sutures, which alone nearly close the wound, are sufficient to stop profuse bleeding. The excised wedge, with the adjacent portion of the tube, is now removed completely and any necroses are interrupted sutures at the uterine site of the wound can be inserted. The only novelty claimed by the author is its possible application in that class of cases in which it is planned to induce sterility without interrupting menstruation or producing an artificial menopause. For in a case of Cæcean section will readily permit of sterilization, insuring the patient against subsequent impregnation and at the same time permitting her to retain the other attributes of mature womanhood. This method should prove to possess all the advantages that are claimed for it, there is hope that at some time the

well-intentioned, but in our judgment ill-advised, crusade against the marriage of unfit persons may be converted into an equally effective but unobjectionable legislation against reproduction by them. In the case of those whom it is considered right to debar for the benefit of the race from reproduction, the outcry about mutilation would be absurd.

SCATTERED LEAVES FROM A PHYSICIAN'S DIARY.

UNDER this title Dr. Albert Abrams, of San Francisco, is giving in the pages of the *Medical Fortnightly* a series of twelve satirical sketches from real life. Those that we have read are both clever and interesting. The third, which is recently finished, is entitled *A Modern Esculapius*, and tells the story of a simple farm youth whose ambition to become a physician is aroused by a former herdsmen acquaintance who has blossomed out into an M. D. and a professor of a bogus diploma mill. The farm youth "qualifies" in due course, only to find that it is one thing to have a diploma and another to earn an honest livelihood by it. The sequel is dramatic, and we have no doubt that such a story has been enacted in real life once, twice, and again. As an instance of Dr. Abrams's epigrammatic writing we quote the following: "The greatest hardship of civilization is to be civilized. The improved condition of man known as civilization is a terrible conflict between reason and intuition, with no legitimate reason for the struggle."

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending March 25, 1899:

DISEASES.	Week ending Mar. 18		Week ending Mar. 25	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	11	4	8	3
Scarlet fever.....	162	18	155	21
Cerebro-spinal meningitis.....	0	11	0	13
Measles.....	224	11	283	11
Diphtheria.....	171	50	177	25
Croup.....	8	4	4	4
Tuberculosis.....	131	169	178	178
Small pox.....	2	1	0	0
Chicken pox.....	55	0	24	0

The New York Academy of Medicine.—At the next meeting, to be held on Thursday, the 6th inst., in the continuation of the discussion on syphilis, a paper will be read by Dr. Francke H. Bosworth on Syphilis of the Respiratory Passages. In a discussion on malaria, Dr. Theobald Smith, of Howard University, will read a paper entitled *The Researches in the Etiology of the Texas Cattle Fever*, and Dr. Barragans, of Mexico, and Dr. Walter B. Jones will read a paper entitled *The Present State of the Insulation of Texas of Malaria*.

A Hospital-Corps Man Commissioned for Gallantry.—The *Boston Herald* of Saturday, March 19, says that a son of a Sergeant in the 10th Mass. Cavalry, now a private in the 10th Mass. Cavalry, has been promoted to the rank of second lieutenant in the army, his name being recommended by the War Department by President McKinley. Private D. J. O'Connell has been officially commended by General O'Connell for gallant service in action with the Filipinos, and for the wounded.

Marine-Hospital Service Health Reports.—The following cases of small-pox and yellow fever were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending March 25, 1899:

Small pox—United States.

Mobile, Ala.	Mar. 17.	2 cases.	
Los Angeles, Cal.	Mar. 4-11.	10 "	1 death.
Washington, D. C.	Mar. 16-23.	No new cases.	
Jacksonville, Fla.	Mar. 4-18.	1 case.	
Key West, Florida.	Mar. 12.	1 "	
Evansville, Ind.	Mar. 13.	1 "	
Atchison County, Kan.	Mar. 16.	21 cases.	
Independence County, Kan.	Mar. 16.	Reported.	
Sumner County, Kan.	Mar. 16.	2 cases.	
Louisville, Ky.	Mar. 9-16.	26 "	2 deaths.
New Orleans, La.	Mar. 4-11.	57 "	
McLaurin, Miss.			3 "
St. Louis, Mo.	Mar. 18.	10 "	
Missoula, Mont.	Feb. 23-Mar. 9.	2 "	
New York, N. Y.	Mar. 11-18.	2 "	1 death.
Cleveland, Ohio.	Mar. 11-18.	17 "	
Laredo, Texas.	Feb. 25-Mar. 4.	59 "	19 deaths.
Alexandria, Va.	Mar. 15.	1 case.	
Alexandria, Va.	Mar. 20.	1 "	
Alexandria, Va.	Mar. 22.	No new cases.	
Norfolk, Va.	Mar. 15-21.	13 cases.	
Cheyenne, Wyo.	Mar. 4-11.	3 "	

Small pox—Foreign.

Bahia, Brazil.	Feb. 11-25.	3 cases.	
Rio de Janeiro, Brazil.	Feb. 3-10.	5 "	4 deaths.
Hongkong, China.	Jan. 20-Feb. 4.	3 "	1 death.
London, England.	Feb. 18-25.	2 "	
Chihuahua, Mexico.	Feb. 25-Mar. 18.	3 "	5 deaths.
Mexico, Mexico.	Feb. 26-Mar. 5.	6 "	1 death.
Yera Cruz, Mexico.	Mar. 8-16.	1 case.	
Moscow, Russia.	Feb. 18-25.	7 cases.	
St. Petersburg, Russia.	Feb. 18-25.	12 "	3 deaths.
Warsaw, Russia.	Feb. 18-25.		1 death.

Yellow Fever.

Rio de Janeiro, Brazil.	Feb. 3-10.	65 cases, 50 deaths.
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The Alumni Association of the New York Hospital held a "snoker" at the hospital, in the administration building, on Monday evening, March 27th. It was the first of a series of such gatherings, two to be held each year, to take the place of the annual dinner. The change seems to promise a more widely spread interest in the association.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 25th ult., the following papers were read: Some Thoughts on Diphtheria, by Dr. I. N. Love; and A Tendo-capsular Advancement Operation, the most Accurate and Dependable Operation for Certain Cases of Squint or Insufficiency of External Eye Muscles, by Dr. F. W. Hilscher.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Tuesday evening, the 28th ult., the subject for the evening was a discussion on Oxaluria and its Clinical Significance, which was opened by Dr. R. F. Williams.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Obstetrics, on Tuesday evening, the 28th ult., Dr. Herman E. Hayd read a paper on Hemorrhages after Labor.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 25, 1899:*

FULEMAN, G. F., Assistant Surgeon. Detached from the *Vermont* and ordered to the Washington Naval Hospital.

HERNDON, C. G., Surgeon. Detached from the *Richmond* and ordered to the *Prairie*.

HIBBETT, C. T., Surgeon. Detached from the *San Francisco* and ordered to the *Baltimore*.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 18 to March 25, 1899:*

CAMP, CHARLES D., Acting Assistant Surgeon, will proceed to Chicago, and upon his arrival there will report to the surgeon-general.

HALL, WILLIAM R., Major and Surgeon, will proceed to Camp Meade, Pennsylvania, on official business pertaining to the provision of proper hospital accommodation of a camp to be established there.

HEIZMANN, CHARLES L., Major and Surgeon, is detailed as a member of a board of officers appointed to meet at Fort Sam Houston, Texas, for the examination of such officers as may be ordered before it, to determine their fitness for promotion.

LEE, HENRY H., Acting Assistant Surgeon, will proceed to Willet's Point, New York, for duty.

LYNCH, CHARLES, Captain and Assistant Surgeon, is detailed as a member of a board of officers appointed to meet at Fort Sam Houston, Texas, for the examination of such officers as may be ordered before it, to determine their fitness for promotion.

McKINNEY, DAVID T., Acting Assistant Surgeon, is relieved from further duty at Minneapolis and will proceed to New Brighton, Pennsylvania, and upon his arrival there will report to the surgeon-general.

PORTER, ELIAS H., Acting Assistant Surgeon, is relieved from further duty at Albany, Georgia, and will proceed to New York and report to KILBOURNE, HENRY S., Major and Surgeon, for duty.

RAYMOND, HENRY L., Captain and Assistant Surgeon, is detailed as a member of a board of officers appointed to meet at Augusta, Georgia, for the examination of such officers as may be ordered before it, to determine their fitness for promotion.

SPALDING, CLARENCE M., Acting Assistant Surgeon, will proceed to Rochester, N. Y., and upon his arrival there will report to the surgeon-general.

THOMAS, JOHN W., Acting Assistant Surgeon, will proceed to New Orleans, and upon his arrival there will report to the surgeon-general.

WALKER, PHILIP G., Captain and Assistant Surgeon, is detailed as a member of a board of officers appointed to meet at Augusta, Georgia, for the examination of such officers as may be ordered before it, to determine their fitness for promotion.

WELLS, DANIEL D., Acting Assistant Surgeon, is relieved from further duty in the Department of Santiago, and will proceed to Havana and report to the commanding officer of the hospital ship *Missouri* for duty.

WILCOX, TIMOTHY E., Lieutenant-Colonel and Chief Surgeon, is relieved from duty as chief surgeon, Department of Matanzas, and will proceed to New York for duty, relieving WOODRUFF, EZRA, Major and Surgeon. Major WOODRUFF, on being thus relieved, will rejoin his proper station, Fort Trumbull, Connecticut.

WOOD, HALSEY L., Acting Assistant Surgeon, will report to KILBOURNE, HENRY S., Major and Surgeon, for duty on the United States transport *Ingalls*.

Change of Address.—Dr. F. S. Mandlebaum, to No. 717 Madison Avenue, New York.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending March 23, 1899:*

WILLIAMS, L. L., Passed Assistant Surgeon. To report to Surgeon C. E. BANKS, chairman, Board of Examiners, Washington, D. C., for examination to determine fitness for promotion to the grade of surgeon. March 11, 1899.

MCINTOSH, W. P., Passed Assistant Surgeon. To report to Surgeon C. E. BANKS, chairman, Board of Examiners, Washington, D. C., for examination to determine fitness for promotion to the grade of surgeon. March 11, 1899.

PERRY, J. C., Passed Assistant Surgeon. To assume temporary command of service at Port Townsend, Wash., during absence of Passed Assistant Surgeon C. H. GARDNER. March 14, 1899.

GARDNER, C. H., Passed Assistant Surgeon. To proceed to Seattle, Wash., and assume temporary command of service, relieving Acting Assistant Surgeon J. B. EAGLESON. Upon being relieved by a regular officer of the service, to rejoin station at Port Townsend, Wash. March 14, 1899.

TITOMAS, A. R., Assistant Surgeon. To report to Surgeon G. W. STONER, chairman, Board of Examiners, Stapleton, Staten Island, N. Y., for examination to determine fitness for promotion to the grade of passed assistant surgeon. March 13, 1899.

WICKES, H. W., Assistant Surgeon. To report to Surgeon G. W. STONER, chairman, Board of Examiners, Stapleton, Staten Island, N. Y., for examination to determine fitness for promotion to the grade of passed assistant surgeon. March 13, 1899.

CUMMING, H. S., Assistant Surgeon. To report to Surgeon G. W. STONER, chairman, Board of Examiners, Stapleton, Staten Island, N. Y., for examination to determine fitness for promotion to the grade of passed assistant surgeon. March 13, 1899. Relieved from duty at Washington, D. C., to take effect March 31, 1899, and directed to rejoin station at New York, N. Y. March 13, 1899.

HASTINGS, HILL, Assistant Surgeon. Relieved from duty at Washington, D. C., to take effect March 31, 1899, and directed to proceed to Cleveland, Ohio, and assume temporary command of service. March 13, 1899.

FRICKS, L. D., Assistant Surgeon. Assigned to duty as sanitary inspector on United States transport *Sedgwick*. March 16, 1899.

RICHARDSON, T. F., Assistant Surgeon. To report by letter to Surgeon J. H. WHITE for duty at the Immigration Depot, New York, N. Y. March 19, 1899.

KING, W. W., Assistant Surgeon. To report to medical officer in command, Detroit, Mich., for temporary duty and assignment to quarters. March 19, 1899.

THOMPSON, F. J., Assistant Surgeon. To report to medical officer in command, Stapleton, Staten Island, N. Y., for duty and assignment to quarters. March 19, 1899.

RAMSES, CURT, Assistant Surgeon. To report to medical officer in command, Cape Charles Quarantine, for duty and assignment to quarters. March 19, 1899.

FOSTER, S. B., Acting Assistant Surgeon. Granted leave of absence for twenty days from March 10, 1899. March 11, 1899.

MAGUIRE, E. S., Hospital Steward. Upon being relieved by Hospital Steward C. H. MILLER, to proceed to Evansville, Ind., and report to medical officer in command for duty and assignment to quarters. March 13, 1899.

MILLER, CHARLES, Hospital Steward. Upon being relieved by Hospital Steward G. H. BROCK, to report to medical officer in command, Detroit, Mich., for duty and assignment to quarters. March 13, 1899.

STEARNS, W. L., Hospital Steward. Granted leave of absence for thirty days from April 12, 1899. March 11, 1899.

KOLB, W. W., Hospital Steward. Upon being relieved by Hospital Steward F. H. PECK, to proceed to Norfolk, Va., and report to the medical officer in command for duty. March 13, 1899.

PECK, F. H., Hospital Steward. Upon being relieved by Hospital Steward C. G. CARLTON, to proceed to the Tortugas Quarantine Station and report to the medical officer in command for duty and assignment to quarters. March 15, 1899.

CARLTON, C. G., Hospital Steward. To proceed to Egmont Key Detention Camp and report to the medical officer in command for duty and assignment to quarters. March 15, 1899.

BECK, J. E., Hospital Steward. To report to medical officer in command, New Orleans, La., for duty and assignment to quarters. March 15, 1899.

GODFREY, JOHN. To proceed to Port Huron, Mich., for special temporary duty. March 21, 1899.

MEAD, F. W., Surgeon. Granted leave of absence for ten days from April 1, 1899. March 17, 1899.

BANKS, C. E., Surgeon. Detailed as inspector of unseizable property in the purveying division at Washington, D. C. March 21, 1899.

WILLIAMS, L. L., Passed Assistant Surgeon. Relieved from duty at Washington, D. C., and directed to assume charge of the immigration inspection service at New York, N. Y. March 22, 1899.

CORN, J. O., Passed Assistant Surgeon. To proceed to Savannah, Ga., for special temporary duty. March 22, 1899.

SMITH, A. C., Passed Assistant Surgeon. To proceed to Savannah, Ga., for special temporary duty. March 22, 1899.

EAGER, J. M., Passed Assistant Surgeon. Relieved from duty at Washington, D. C., and directed to proceed to Cleveland, Ohio, and assume temporary command of service. March 22, 1899.

WICKES, H. W., Assistant Surgeon. Granted leave of absence for two days from April 3, 1899. March 21, 1899.

HASTINGS, HILL, Assistant Surgeon. Order of March 13, 1899, to proceed to Cleveland, Ohio, revoked, and directed to proceed to Seattle, Wash., and assume command of service. March 22, 1899.

GRUBBS, S. B., Assistant Surgeon. Detailed as quarantine officer for the port of Cienfuegos, Cuba. March 17, 1899.

VOX EPOWELL, E. H., Assistant Surgeon. To report to medical officer in command, South Atlantic Quarantine Station, for temporary duty. March 18, 1899.

MCADAM, W. R., Assistant Surgeon. To report to med-

ical officer in command, Tortugas Quarantine, for temporary duty. March 19, 1899.

Boards Convened.

Board convened to meet at Washington, D. C., at 11 A. M., March 13, 1899, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Surgeon C. E. BANKS, chairman; Surgeon J. H. WHITE, and Passed Assistant Surgeon G. T. VAUGHAN, recorder.

Board convened to meet at Washington, D. C., at 9 o'clock A. M., March 14, 1899, for the examination of officers of the service, to determine their fitness for promotion to the grade of surgeon. Detail for the board: Surgeon C. E. BANKS, chairman; Surgeon J. H. WHITE, and Surgeon P. M. CARRINGTON, recorder. March 10, 1899.

Board convened to meet at the United States Marine Hospital, Stapleton, N. Y., Wednesday, April 5, 1899, for the examination of assistant surgeons of the service, to determine their fitness for promotion. Detail for the board: Surgeon G. W. STONER, chairman; Passed Assistant Surgeon L. L. WILLIAMS, and Passed Assistant Surgeon W. P. MCINTOSH, recorder.

Appointments.

STEWART, OLIVER, of Michigan, appointed acting assistant surgeon for duty at the port of Port Huron, Mich. March 11, 1899.

BECK, JULIUS E., of Ohio, appointed junior hospital steward. March 11, 1899.

Society Meetings for the Coming Week:

MONDAY, *April 3d*: New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association (annual); Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society (annual).

TUESDAY, *April 4th*: New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Broome (quarterly) and Niagara (quarterly), N. Y.; Essex (annual—Newark), Hudson (Jersey City), and Union (annual—Elizabeth), N. J., County Medical Societies; Androscoggin, Maine, County Medical Association (Lewiston); Chittenden, Vermont, County Medical Society; Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *April 5th*: South Carolina Medical Association (Harris Lithia Springs, Laurens); New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond (New Brighton), N. Y.; Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, *April 6th*: New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, *April 7th*: Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, *April 8th*: Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Births, Marriages, and Deaths.

Married.

HILL—EGELSTON.—In Churchville, N. Y., on Wednesday, March 22d, Mr. Baird Z. Hill and Miss Jennie May Egelston, daughter of Dr. Benjamin F. Egelston.

PIERCE—MOREL.—In Coconut Grove, Florida, on Monday, March 20th, Dr. V. Mott Pierce, of Buffalo, and Miss Marion Young Morel.

STEWART—SAUNDERS.—In Wallingford, Vermont, on Monday, March 20th, Dr. William E. Stewart and Miss Anna Saunders.

THORNTON—CURANE.—In Boston, on Tuesday, March 21st, Dr. James Brown Thornton and Miss Catherine Ruth Curane.

Died.

EVANS.—In Cambridge, Massachusetts, on Sunday, March 19th, Dr. David Evans, in the fiftieth year of his age.

LLOYD.—In Poultney, Vermont, on Saturday, March 25th, Dr. William E. Lloyd.

McAULIFFE.—In New York, on Sunday, March 19th, George G. McAuliffe, son of Dr. George B. McAuliffe, in the fifth year of his age.

WILCOX.—In Ticonderoga, N. Y., on Friday, March 24th, Dr. Rollin C. Wilcox.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.*

By ARTHUR N. TAYLOR, LL. B.

XII.

RIGHTS AND LIABILITIES OF THIRD PARTIES.

(Continued from page 422.)

Who has Authority.—It is a general rule of law that one who deals with an agent is bound to know at

* In Article IX, the rule of liability of the mother for necessities furnished the minor child after the father's death is stated more broadly than it should be, for the liability of the mother under such circumstances is not in all respects the same as that of the father. When necessities are furnished by the father's authority to the minor child,

his peril the extent of the agent's authority. This rule should be kept in mind while considering who has and who has not authority to bind his principal.

The president of a railroad company has authority to employ a physician and surgeon to attend its injured employees, and by so doing binds the company to pay for such services.

It is pretty well settled that a general superintendent has the same authority.* In the case of Cincinnati, Indianapolis, St. Louis, and Chicago Railroad Company vs. Davis, the company endeavored to escape liability on the ground that it employed a chief physician and surgeon whose duty it was to employ surgeons to give professional attention to persons injured by its trains. Justice Elliott said: "It would be unreasonable to require a surgeon to give professional assistance to a person injured by the company's trains, and then deny him compensation upon the ground that the superintendent had no authority to employ him because that authority was lodged in a chief surgeon. Nor are we willing to sanction a rule imposing upon the surgeons whose services are requested by the superintendent the duty of making specific inquiry as to the scope of the superintendent's authority. Such a rule would operate harshly in many cases, for, if the surgeon must stop to make inquiries before leaving his home or office, the injured man might perish. Better railroad companies should be held responsible for the acts of such a high officer as a general superintendent, although as between him and his principal that officer may usurp authority that is vested in a subordinate agent, than that a surgeon who obeys the summons of a superintendent should be compelled to go unpaid."†

This is undoubtedly the correct rule, notwithstanding the superior court of the city of New York held in 1853 that the superintendent of the New York and Harlem River Railroad Company would not be presumed to have authority to bind his company to pay for medical services engaged by him as officer of such company. The evidence showed that the superintendent had a general supervisory control over the whole line of the road, everything connected with the running of the road being under his supervision and control, and that he paid money to drivers, conductors, and other persons employed by him as superintendent, but had no direction over the treasury. The court argued from this evidence that it did not appear that the superintendent had authority to arrange and liquidate claims made against the company for damages resulting from the negligence of its agents and servants, and that the power exercised in employing a surgeon to attend one employed by the road was analogous thereto, and was consequently not within the scope of his authority.

As this case was not decided by a court of highest authority in the State, and is in direct conflict with reason and justice, and as well with the courts of all other States which have passed upon the question, it is doubted whether the decision would be regarded

as a proper precedent to follow even in New York State.

The division superintendent also has authority to employ physicians and surgeons on behalf of the company.* The supreme court of Kansas recognizes, however, a distinction between professional services rendered to employees and those rendered to injured passengers upon the request of the division superintendent; while in the former case they uphold the presumption of his authority to bind the company, in the latter they repudiate the doctrine.†

A general agent or general manager of a railroad company, which are judicially defined as being the same, is likewise presumed to have power to procure medical attendance for an employee injured in the service of their company.‡

Any agent, employee, or servant of the company, if properly authorized, and acting in accordance with his instructions, may bind the company for services of a physician or surgeon rendered at his request. Where an inspector of a street-railway company was instructed by the company "to see that those injured were taken somewhere where medical aid could be given," employed a physician to attend a passenger who was injured in getting off the car, the company was held to pay the physician's fee.§ And so, when a physician was employed by an agent or employee of a brewing company to attend an employee who had been injured, and the physician inquired of the agent employing him who would be responsible for his medical attention to the injured employee, the agent replied that he had no authority to bind the company, but he would write to them and let the physician know. On the following day the agent showed the physician a telegram from the company as follows: "Have the negro treated." The physician relied upon the telegram, and the court held that he was justified in his conclusion that the agent was authorized to procure medical services to "have the negro treated."||

For an agreement by a company to pay a physician's fees to be of such a character as to enable the physician rendering services to avail himself of it, such agreement or contract must be made with him direct, either by an officer or agent of the company properly authorized to make such contract.¶

If, for example, a physician is called by one injured in a railroad accident to attend him, the physician's contract is with the patient; and the relation does not change even though the president of the railroad calls upon the patient and tells him to employ any physician or surgeon he chooses and the company will pay the expense.Ⓜ This promise to the patient does not create a privity between the company and the physician. If, however, the promise were made to the physician direct and acted upon by him, the company would be bound to him in the full amount of his fee.

Where a company contracts with a physician to attend an employee who has been injured, and reserves

he is liable for their payment in all cases, but, by the rule most commonly in force, the mother, being the head of the family, is liable for such necessities only when the child has no separate estate which may be subjected to that burden.

* *Atchison and N. R. Co. v. Beecher*, 21 Kan. 106; *McCarthy v. Missouri R. Co.*, 25 Mo. App. 355.

† *Cincinnati, Indianapolis, St. Louis, and Chicago R. Co. v. Davis*, 126 Ind. 99, 94 L. R. A. 503, 25 N. E. Rep. 878.

‡ *Stephenson v. New York and Harlem River R. Co.*, 2 Burr. 111.

* *V. P. R. Co. v. Winterbotham*, 22 Kan. 141.

† *Union Pacific R. Co. v. Betts*, 25 Kan. 75.

‡ *Atlantic and P. R. Co. v. Royster*, 18 Kan. 438.

§ *Hanson v. Minneapolis S. R. Co.*, 23 L. R. A. 695, 24 N. W. Rep. 244 (Minn.).

Ⓜ *Montgomery Brewing Co. v. Coffey*, 9 A. C. 2, 9 So. Rep. 573.

¶ *Thomas Mfg. Co. v. Prather*, 14 S. W. Rep. 218 (Ark.).

Ⓜ *Cannery v. S. P. R. Co.*, 6 Cal. 537.

the right to determine what is a reasonable compensation, the court has held that the physician was bound by such reservation, and would not be permitted to recover a greater amount than that fixed upon as a reasonable compensation and tendered by the company. The reason upon which the court holds the physician to this arbitrary determination of the amount of his fee is that the company is under no legal obligation to supply such medical attendance, and therefore if it does assume such obligation it has the right to impose such conditions as it sees fit.* It is doubtful, however, whether the courts will extend the application of this doctrine, or will apply it to this extent where the employee is injured by reason of the negligence of the company.

It is pertinent to state in passing that a contract by a physician with a railroad company to render professional services to employees of the company, or to those to whom the company is liable for personal injuries, does not bind the physician to render services to persons injured while trespassing on the property of the company.†

Who has not Authority.—It seems well settled that the authority to employ a physician on behalf of the company is not included in the general power and authority vested in the conductor, roadmaster, or station agent by virtue of his office or position.‡ And it makes no difference however positively such employee promises the company will pay, such engagement and promise are wholly outside of the scope of their general authority.⁴ Nor is there any such authority lodged in an engineer.⁵ Nor is the attorney or solicitor of the road presumed to have such authority.⁶

The courts have also held that the employment of a physician or surgeon for the treatment of injured employees does not come ordinarily within the scope of the duties of a general manager of an ordinary manufacturing business,⁷ nor of the manager of a plantation.⁸

In this regard, it will be observed, a distinction is drawn between a railroad company, which is bound by such contracts made by its general manager or general agent, and an ordinary manufacturing business.

Whether or not a physician regularly employed by a railroad company to treat its injured employees has power to bind the company for board and care of such injured employees has several times been considered, and the courts have held that he has no such authority.⁹ In the case of *St. Louis, Arkansas, and Texas Railway Company vs. Hoover*, it was held that the railroad company was under no obligation to refund money advanced by the physician for such board and care rendered to an injured employee.‡

An exception to the rule that a conductor or em-

ployee of the class just considered is unauthorized to employ a physician is found in the humane doctrine of emergency, which is recognized as law by the courts of Indiana, but which has not been followed by the courts of any other States.

This doctrine is based upon the theory that the conductor or employee of highest authority in the immediate locality represents the company, and that in case of a sudden and pressing emergency extraordinary authority and powers arise in him, adequate to the urgent and immediate demands of the occasion.*

This extraordinary power in the conductor or other representative is only coextensive with the duration of the emergency which gives rise to it.† If, therefore, an employee is seriously injured, or injured in such a way that immediate attention should be given him, the conductor or employee of highest authority is empowered to engage the services of a physician and bind the company in so doing. This contract, however, can only be binding upon the company for such services as are immediately and urgently necessary.

In a case where a large number of employees are injured, and there being present only one of the company's surgeons, who is unable to attend all of the wounded, the conductor is authorized to employ another surgeon to amputate the leg of one of the persons injured, and the company is bound to pay for such operation, but not for attention given to such employee after the operation was performed.‡ This doctrine empowering minor agents to bind the company for medical services rendered in case of emergency, it will be remembered, has been recognized as law only by the courts of Indiana. Whether or not this doctrine will gain recognition in other States can not be predicted with certainty, but, as it is founded upon good reasoning and justice, a more extended adoption of the rule may be hoped for.

(To be continued.)

Pith of Current Literature.

The Ætiology of Acute Ulcerative Endocarditis.—Benda (*Riforma medica*, December 13, 1898), in two cases of ulcerative endocarditis, demonstrated to the Society of Internal Medicine of Berlin that in one case the point of entry was the kidney and in the other the tonsil. He combated the opinion of most authors who maintain diphtheroid endocarditis to be a secondary metastatic affection.

The Effect of Infant Vaccination upon Small-pox.—Dr. Alfred Robinson (*Quarterly Medical Journal*, January), in an inaugural address recently delivered before the Sheffield Medico-chirurgical Society, said that in England and Wales the strongest evidence was afforded of the influence of infant vaccination and of its neglect upon the age incidence of small-pox. During the seven years, 1848-'54, the earliest years for which the information was available, of 1,000 deaths from small-pox, 677 occurred among children aged under five

* *Terre Haute and Indianapolis R. Co. vs. McMurray*, 98 Ind., 358.
† *Ohio and M. R. Co. vs. Early*, 141 Ind., 73; 28 L. R. A., 546; 40 N. E. Rep., 257.
‡ *Evansville and R. Co. vs. Freedland*, 4 Ind. App., 207; 30 N. E. Rep., 803.

* *Frazer vs. San Francisco Bridge Co.*, 103 Cal., 79.

† *Directors of Poor vs. Donnelly et al.*, 5 Cent. Rep. (Pa.), 269.

‡ *The Peninsula Railroad Co. vs. Gury*, 23 Fla., 356; *Tucker vs. St. Louis, K. C., and N. R. Co.*, 51 Mo., 177; *Sevier vs. Birmingham S. and T. R. Co.*, 92 Ala., 258.

⁴ *St. Louis and K. C. R. Co. vs. Olive*, 19 Ill. App., 82.

⁵ *Cooper vs. N. Y. C. and H. R. R. Co.*, 6 Hun, 276.

⁶ *St. Louis, Ark., and Tex. R. Co. vs. Hoover*, 53 Ark., 377.

⁷ *Chaplin vs. Freedland*, 7 Ind. App., 676; 31 N. E. Rep., 1007.

⁸ *Malone vs. Robinson*, 12 So. Rep., 709 (Miss.).

⁹ *Chicago and E. R. Co. vs. Behrens*, 37 N. E., 26; *Bushnell vs. C. and N. W. R. Co.*, 69 Ia., 620.

‡ *St. Louis, Ark., and Tex. R. Co. vs. Hoover*, 53 Ark., 377.

years, while in subsequent groups of five years the proportional number at this age period steadily declined to 193 in the years 1885-89, and afterward rose again to 283 per 1,000 in the five years, 1890-94, concurrently with the decline of infant vaccination.

Unfortunately, he said, no satisfactory official vaccination statistics existed prior to 1872, but it was clear that between 1872 and 1887 the mean percentage of default in infant vaccination fluctuated, but only ranged between 4.3 and 6.4. Since 1887, however, this percentage of default had steadily and rapidly increased to 9.9 in 1889, to 11.3 in 1890, to 13.4 in 1891, to 11.9 in 1892, and to 16.1 in 1893.

It seemed impossible to avoid the connection between vaccination default and this rapid increase of small-pox and the increased incidence of small-pox mortality in young children during the five years, 1890-94, following as it did a steady decline in its proportional incidence during the preceding forty years in which infant vaccination was increasingly practised. Not only had the proportion of deaths from small-pox among children under five to those of all ages declined, but the death-rate of children in this age period from small-pox, which was 1,514 per million in the seven years, 1818 to 1854 (the earliest for which this information was available), had steadily declined in each of the four decennial periods, to fifty per million in 1885-91, or one thirtieth of the rate in the seven years preceding the enactment of compulsory vaccination.

Two Mice in a Child's Intestine.—W. Fritz (*Münchener medicinische Wochenschrift*; *Abeille médicale*; *Revue médicale*, March 8th) says that in attending a child of three years of age for what he diagnosed as intestinal obstruction due to invagination, he administered intestinal irrigations and castor oil. Abundant stools were suddenly evacuated, of fetid odor, in which were found the bodies of two mice, manifestly the cause of the obstruction. Their appearance gave evidence of a protracted stay in the child's intestine. The subsequent stools contained tufts of mouse hair, proving indisputably the passage of the animals through the child's intestinal canal. No explanation of the way in which the mice found their strange habitat is forthcoming.

The Bearing of the Lymphatic Glands on the Modern Doctrine of Infection and Immunity.—Maufred (*Giornale internazionale delle scienze mediche*, November 30, 1898) thus sums up his researches: The lymphatic glands cooperate in the struggle waged by the organism against the bacteria which continually invest and threaten it from the surface of the skin and the mucous membranes, often successfully, by means of a triple function: 1. A filtering action by which they keep the invading bacteria confined in their own tissues, thus preserving the general vitality for a longer or shorter time. 2. An attenuating action upon the same bacteria by which they are killed and then undergo in the adenoid tissue a partial or total loss of their virulence. 3. An immunizing action, resulting from the fact that the organism, under the influence of the two others, attains a state of immunity more or less varied and intense.

The Place of the Pessary in Modern Gynecological Practice.—Dr. J. W. Ballantyne (*Scottish Medical Journal*, March), at a recent meeting of the Edinburgh Obstetrical Society, said that the importance of this subject could not be gauged from the amount de-

voted to it in the society's *Transactions* in the last twenty years, which only amounted to six pages and a half. Inquiry at the various instrument makers showed (1) a steady increase in the number of pessaries sold in the last twenty years; (2) a decrease in the varieties asked for, the most frequent being the ring and Hodge, or their modifications, and occasionally a vaginal stem; (3) a growth in the demand for cures; (4) an almost complete absence of demand for intra-uterine stems.

A study of twenty well-known text-books showed eight strongly in favor of the pessary, five strongly against it, and seven critical of its employment. The advocates of the pessary admit that it has inconveniences, that it must be used with care and intelligence, that it seldom cures, and that it must occasionally give way to operation. Those strongly opposed admit a small residuum of cases where it may or must be used. The chief objections urged against the pessary are: 1. Its *inconvenience*, amounting in some to unpleasantness, giving an unhealthy feeling of dependence on a medical adviser, entailing regular douching, setting up or aggravating a malodorous discharge, interfering possibly with marital relations. 2. *Inefficiency*, in that it rarely cures; some doubting, indeed, if it ever even relieves symptoms, and stating that it may be doing further harm by damaging to a still greater extent the supports of the uterus. 3. Its *injuriosness*. Intra-uterine stems, Zwanck and large ball pessaries have come in for special condemnation, from which the ring and Albert Smith, carefully used in suitable cases, have been generally acquitted. Other writers regard all forms as dangerous, and include among the sequelae to be expected from their use pruritus, vaginitis, ulceration, fistula formation, prevention of union of a torn cervix, subinvolution, cancer, septic inflammation of uterus and tubes, and one writer (Balls Headley) magnifies the inconvenience in marital relations into a danger to morals, saying that the pessary "strikes at the root of the institution of marriage, and especially of monogamy."

The general advantages claimed for the pessary are: 1. *Convenience*—all strong supporters emphasize this. An occasional visit to a gynecologist occupying only a few minutes; frequent vaginal douching, which may be required anyhow; and a transitory feeling of uneasiness in the pelvis when the pessary does not fit exactly or has been worn too long, can not be regarded as sufficient reasons for advising a patient to face the ordeal of a plastic operation with all its inconvenience, expense, and enforced confinement. 2. *Efficiency*. All advocates of the pessary say that it is effective in relieving symptoms, and some maintain that a permanent cure may be effected in some cases in a longer or shorter time. 3. *Safety*. Most gynecologists admit the safety of the ordinary vaginal forms. Others also claim that intra-uterine stems and instruments of the Zwanck type are innocuous; bad results are put down to want of care on the part of the physician or patient.

The opinions of those gynecologists who gave a critical approval to the use of pessaries have been reviewed under the various displacements: (1) *In complete prolapse*, the employment of an Esmarch rubber ring or Hodge Smith, with or without wire bars for cystocele, relieves symptoms, and, in the event of pregnancy occurring, the pessary may be removed in a permanent cure. Most agree that pessaries in these cases have only a palliative effect. (2) *In complete prolapse*, the pessary form of

support is the vaginal stem. The Zwanck and all instruments with screws and hinges are generally regarded as unsatisfactory and dangerous. Even with such forms as the Cutter pessary the relief afforded is precarious. 3. *Antrotractions (sic)*. Most authorities are agreed that vaginal pessaries can do no good here, except possibly when metritis is superadded and the support of a ring might benefit that condition. The use of the intra-uterine stem is condemned by most of these writers as dangerous and tending to sepsis, inflammation, and perforation of the uterus. The stem brought forward by Le-four seems to be the least dangerous—it has no vaginal portion. 4. In *retrotractions (sic)*, these writers are by no means agreed as to the position of the pessary here, and several of them find it necessary to consider the subject under a number of headings. Thus, J. C. Webster divides cases of retroversion into seven classes, and gives special directions for the management of each; these considerations set forth by Webster express the opinions of the majority.

The paper was largely discussed by the members present, most of whom allowed the pessary a large sphere of utility.

Indicanuria.—Dr. William S. Wadsworth (*Proceedings of the Pathological Society of Philadelphia*, March 1st) says that indicanuria may be said to be the occurrence of a substance, or substances, in the urine which may be made to yield a blue color by the application of hydrochloric acid and an oxidizing agent in given proportions. The blue color is occasionally developed spontaneously in the urine upon standing. Cases have been reported in which the color was developed within the body, and it may enter into the composition of vesical calculi.

The chemical considerations, he says, while extremely interesting, do not at this time immediately concern us further than a few general relations. The blue coloring substance is similar to plant indigo, if not the same. It is a produce of the disintegration of nitrogenous bodies. It is related to several other substances, notably indigo-red, that frequently occur in the urine, either with indican or independently.

The chemical theories as to the derivation of this substance through indoxyl sulphate from indoxyl, and this from indol, serve very well till the rather rapidly changing chemical philosophies give us something better.

Urine containing indican may be otherwise normal so far as our present understanding extends. Ordinarily no change of color is observed, though it may be dark, owing to the presence of various substances. The normal constituents vary apparently with complete independence. The sulphates may be increased, though this matter is still far from clear. Albumin and sugar he has found present occasionally. Coloring matter and urates, if in excess, give rise to confusion in estimating the amount of indican unless special precipitants have been used. The presence of bile is also a troublesome feature. The degree of acidity, the specific gravity, the total amount of urine, the odor, the sediment, all appear to vary independently, and, though each has been singled out by one hasty reasoner as of importance in relation to indican, we know of no permanent or fundamental relationship.

Indican occurs in a great variety of diseases and in apparent health. In one hundred cases under treatment at the Pro-Catheter Hospital, taken at random from the

various wards, he found fifty in which indican was present in the urine in varying amounts. The amount varies, as does sugar, with the time of day, activity, taking of food, and the various acts of life. It varies from day to day and over long periods. In twenty cases he repeated the tests at varying intervals and found great variability. In several cases that he had under continual observation he found similar variations. It has been found in cases where the diet was carefully noted, and appears to disregard all dietetic theories. A vegetable diet is asserted to be of special value in reducing indican, yet indican is found in very large amounts in the urine of the horse and of cattle. Milk is supposed by some to reduce it, but one of the first cases published was one of "blue urine" that was cured by discontinuing the use of milk and limewater. Notwithstanding this apparently negative evidence, diet has a decided influence in the individual. Thus, while milk and limewater kept up the condition in the case mentioned, it was a change in diet that did reduce the indican.

Unquestionably certain substances increase the output of indican, just as the amount of sugar in the urine is changed by modifying the diet. In this connection it is most interesting to think how much importance we attach to glycosuria, and how little to indicanuria. Both indicate perverted metabolism; these, with uric acid urine, form an important group. It has been asserted that the acidity of the gastric secretion has a great influence on the amount of indican. While Dr. Wadsworth is not in possession of sufficient clinical data to confirm this, he is strongly inclined to believe that this is a significant factor.

It has been asserted that bone disease is a sure cause, and that fractures always cause indicanuria. Dr. Wadsworth has observed several cases of fracture, both recent and of old standing, and finds rather less indican than usual.

Prolonged suppuration is a favorite text-book cause, yet, he says, and to relate, it appears to have very little influence. He has a number of fracture cases in which there is no increase—in fact, several bad cases gave no indican at all.

Constipation is another imaginary cause that fails to give any increase, even in some of the most persistent gynecological cases. Several other diseases that have been supposed to be peculiarly related to indicanuria appear to be equally unimportant, though the author's experience with them has not been sufficient to warrant a more definite statement.

The temptation to suggest some diseases in which indican is produced is naturally great, and the author yields to it to this extent; he believes it will be found that nervous disorders depending on malnutrition, and those that influence nutrition markedly, have a tendency to indicanuria. His experience has been too limited to establish such a relation, though the cases he has studied strongly suggest it. One caution he must add, however, viz., that it occurs in only certain types of neuro-neritis.

Regarding the physiology and pathology of indican production, he says, our knowledge is far from satisfactory. Briefly outlined, it is somewhat as follows: The food passing through the stomach is acted on by acid and pepsin (proteolysis). It is moved on after a variable period to the intestine. Up to this point we have three factors that may influence the end product: 1. Amount and rate of flow of acid. 2. Muscular activity of stomach. 3. Fermentative processes. In the intestine we have partial or complete neutralization of the

acid and further proteolysis (trypsin), the changes depending again on three factors: 1. The residual reaction of the chyme. 2. The rate of intestinal propulsion (which limits the action of the intestinal juices or allows time for putrefactive process). 3. Chemical influences—proteolysis, putrefaction, fermentation.

This combined chemical activity gives rise to normal products that are easily converted into new substances, on the one hand, for the use of the organism; and on the other, to deleterious substances which may or may not be absorbed. These processes are regulated by the nervous system, and depend on the condition of the tissues of the gut. The whole process varies greatly with the kind, quantity, and condition of the food. Variations in local irritability, in central irritability, and in general nervous tone affect profoundly the secretion of acid, pepsin, and intestinal juices, and produce a wide range of variability in the motor power of the whole tract.

The most plausible theory of the origin of the substances from which indican is produced presupposes a changed proteolysis, and an understanding of the regions, processes, and conditions of normal proteolysis in the digestive tract is the beginning of an understanding of these perverted proteid changes, and we can see how a disturbance of the motor or secretory power of the nerves supplying the tract should modify the normal proteid products that are presented to the absorbing surfaces in the bowel.

We see, he adds, how absurd it is to expect to find one disease that will always give rise to indican. When we realize that the intestinal tract is a chemical laboratory, and that each reaction is conditioned, we see how very unlikely it is that proteolysis will go on normally under all circumstances. We find indican under certain conditions that are not uncommon, yet for which it would be difficult to find a name in the categories of disease. We see that these conditions may arise in health, and that they may not be a part of the diseases in which they exist. Our problem lies in the further study of these conditions, and of the remedial measure that will counteract the tendency to produce that gastro-intestinal equation which permits and promotes perverted proteid change; to determine accurately what gastro-intestinal conditions favor this change and what states of the regulatory nervous mechanism tend to bring about these gastro-intestinal conditions.

first insisted upon descending the stairs. To do this would have been certain death.

Pushing her charge through the window, Miss Troop half carried and supported her down the narrow vertical ladder in safety to the ground, and scarcely had they reached the street when the upper floors collapsed with a crash.

The action speaks for itself, and one can not help admiring the nurse's cool-headed pluck and her profession, which will train a woman to keep her wits about her in such a terrifying emergency, and to think first for her patient. Nor can one help congratulating the individual who has had such an opportunity to be of such signal service to another.

WILLIAM S. THOMAS, M. D.

Book Notices.

The Treatment of Wounds: its Principles and Practice, General and Special. By LEWIS STEPHEN PILCHER, A. M., M. D., Late Passed Assistant Surgeon, United States Navy, etc. With One Hundred and Forty-two Wood Engravings. New York: William Wood & Co., 1899. Pp. xiii+453. [Price, \$3.]

A MODERN and up-to-date work on the treatment of wounds has long been missing from American medical literature, and the appearance of this handsome volume by so distinguished an author is especially welcome. Every page shows the writer's experience and training in the practical points of operative surgery, while the literature, even the most recent, has not been neglected. The book is divided into two sections, one of which is devoted to general principles, bacteriology, inflammation, disinfection of wounds, etc., and a second portion which applies the general principles to wounds of special form or situation. Of the two, the second is perhaps the better. Not that any gross errors are to be detected, but several points mar the perfection of the whole. The antediluvian cuts illustrating the process of repair in wounds and those of the pathogenic bacteria have marred the pages of too many volumes in the past to be allowed a place in any modern work, especially since methods of reproduction have become so perfect and so cheap. The author's regret that pathologists have extended the use of the idea of inflammation to include all the processes taking place in the course of repair is rather misplaced, inasmuch as the process of simple aseptic healing, so called, and the more striking and evident one of healing by second intention, with varied clinical symptoms, are the same when minutely studied, and only differ in the degree with which necrosis or supuration or granulation occurs upon the scene. Too little stress is laid, we think, upon the necessary germ contents of every aseptic wound, and upon the great importance of considering the resistance of the patient to infection. For instance, a child or a healthy adult will stand greater degrees of wound infection without the necessity of primary healing than the debilitated or aged person in whom wound infection may develop at the very first, almost promptly. The "practical" section should know these things, for practical purposes, and rest the recent attempt to change the word "infection" for the necessary infection of wounds with rubber gloves during operation. A word or two and a few

Letters to the Editor.

A NURSE'S HEROISM.

ST. LUKE'S HOSPITAL, NEW YORK, March 18, 1899.

To the Editor of the *New York Medical Journal*:

SIR: The recent fire at the Windsor Hotel affords several examples of heroism, and one particular instance of devotion to duty which furnishes food for reflection to the cynical who believe that doctors and nurses regard their patients as business customers merely.

Miss Troop, a trained nurse, and her crippled patient were on the fifth floor when the fire started. At the time they became aware that the building was burning the corridors were densely filled with people, so that only previous knowledge of the location of the nearest fire escape enabled the nurse to grope her way to it, dragging with her the frightened patient, who

other minor defects, the work is most sound in its principles, and no point of value has been neglected. It is in every way a credit to American scholarship.

The Practitioner's Manual: A Condensed System of Medical Diagnosis and Treatment. By CHARLES WARRENE ALLEN, M. D., Consulting Genito-urinary Surgeon to the City (Charity) Hospital, etc. New York: William Wood & Company, 1899. Pp. ix+851. [Price, \$6.]

THIS imposing volume is intended to assist the discouraged medical man in his search for therapeutic hints, and is therefore arranged alphabetically, with a short description of each disease, to aid in diagnosis. The number of useful formulae is enormous, and we recognize many old and valuable friends. The book is a storehouse of therapeutic facts, and is to be recommended to all such as feel the need of a work for hasty reference.

Handbuch der Therapie innerer Krankheiten in sieben Bänden. Herausgegeben von Dr. F. PENZOLIT, Professor in Erlangen, und Dr. R. STINTZING, Professor in Jena. Zweite theilweise umgearbeitete Auflage. Neunzehnte Lieferung. Mit 13 Abbildungen im Text. Pp. 3 to 320. Zwanzigste (Schluss-) Lieferung. Mit 50 Abbildungen im Text. Pp. 321 to 625. Achtzehnte Lieferung. Mit 16 Abbildungen im Text. Pp. 571 to 862. Jena: Gustav Fischer, 1898.

By reason of the highly specialized character of many of the subjects considered in this concluding section of the *Handbuch der Therapie*, the chapters devoted to them form the least useful portion of this valuable work. For, the necessary limitations of space having precluded the description of methods of treatment with the fullness of detail necessary for a work of reference, or even for a text-book, these chapters possess little interest for either the specialist or the general practitioner. In other respects this portion shows the same admirable qualities frequently remarked in the other parts of the work.

Part XVIII begins with the continuation of the chapter on the treatment of neuralgias and other diseases of the nervous system by Edinger. It is rich in suggestions for the successful management of these sometimes troublesome cases. It is followed by a series of chapters by Stintzing on the treatment of diseases of the spinal cord and its meninges, in which the author insists on the importance of early diagnosis and sanitarium treatment and on the value of regular exercises with special mechanical devices.

Schede contributes an interesting critical discussion of operative procedures for the relief of disease of the nerves and spinal cord.

The chapters on disease of the brain, a considerable part of which is devoted to diagnosis, and a brief chapter on brain surgery are the respective contributions of Henschen and Dahlgren, of Upsala.

A chapter, by Eminghaus, on the general management of the insane, which constitute about one half of the section on mental disease, treats in a comprehensive manner the entire topic in this department of therapeutics. The pre-treatment of the patient of the separate form of insanity, by Ziehen, is, on the other hand, exceedingly meagre.

The chapter on general orthopedics, by von Hei-

neke, and on massage and passive and active exercises, by Ramdohr, are among the least satisfactory of the work. This is due to the small space allotted to these subjects, as it is evidently impossible to describe satisfactorily the treatment of clubfoot, for instance, in one page, or the treatment of flat-foot in twenty lines.

Lenhartz contributes a chapter on the treatment of rheumatism and diseases of muscles, and Hagenbach-Burkhardt and Winckel furnish that on disease of bone.

On the Study of the Hand for Indications of Local and General Disease. By EDWARD BLAKE, M. D. London: Henry J. Glaisher, 1898. Pp. 11 to 53.

THE author of this interesting little volume has endeavored to trace the connection of the changes which take place in the hand in patients suffering with general diseases. The changes in the nail nutrition after or during severe fevers is well illustrated by several drawings. The most marked and valuable indications furnished by the hand are of course those in the rheumatic and gouty conditions and in the nutritional diseases, such as acromegaly and Marie's pulmonary arthropathy, and these are discussed quite fully.

La suture intestinale. Histoire des différents procédés d'entérorraphie. Par FÉLIX TERRIER, Professeur de médecine opératoire à la Faculté de médecine, etc.; et MARCEL BARDOLIN, Préparateur du cours de médecine opératoire à la Faculté, etc. Cours de médecine opératoire. Leçons professées pendant le semestre d'été 1898, à la Faculté de médecine de Paris. Avec 587 figures dans le texte. Paris: Institut de bibliographie scientifique, 1898. Pp. viii+415. [Prix, 15 francs.]

THE authors have endeavored to produce a work of reference in which all the operative procedures for suture of the intestine should be arranged in a chronological order and be made accessible by very complete indices, so that any method or even any illustration may be found and referred to with the least possible waste of time and energy. In this they have succeeded in a very remarkable manner and have made a very valuable contribution to surgical literature. The whole originated in a series of lectures delivered during the summer semester of 1898. The notes of these lectures were taken down and immediately revised and rewritten, the references were verified, the illustrations were added, and the whole was arranged chronologically.

The curious methods employed by the early Hindus are the first to be mentioned, then those of the middle ages, and finally the immense complexities of the modern surgical renaissance. As a mere example of the latter and an instance of the constant repetition which is to be noticed in all operative work where the method of one man is forgotten or unnoticed, and the whole process is, innocently enough, reinvented by another, is the collection of six names attached to the method of support by collapsible rubber bags during the course of the suturing of the intestinal wall. This same thing is to be noticed throughout the whole book, so that the really valuable methods can be enumerated, if not on the fingers of one hand, at least on those of both. Not the least praiseworthy part of the volume is the large number of illustrations in the text, most of them copied by photography from the original articles, so as to guarantee absolute accuracy. The work is an invaluable one for the purpose of reference.

The Phonendoscope and its Practical Application. Lectures delivered by ACRELIO BIANCHI, M. D., of Parma, Professor of Preparatory Clinical Medicine and of Pathology. Translated by A. GEORGE BAKER, A. M., M. D., Physician-in-Chief of the Chinese Medical Dispensary, Philadelphia, etc. With Translations of Special Articles by FÉLIX REGNAULT, M. D., of France, and M. ANASTASIADIS, M. D., of Greece. Philadelphia: George P. Pilling & Son, 1898. Pp. 9 to 77. [Price, 50 cents.]

THESE translations of Bianchi's lectures on the phonendoscope are of value in furnishing the views of the inventor of the instrument and his ideas on the methods of using it. They are well illustrated with a number of diagrams showing the outlines of the internal organs as demonstrated by means of this new device for assisting the ear.

Organothérapie ou opothérapie. Par le Dr. C. HILLEMANT, Ancien interne des hôpitaux de Paris, etc. Paris: G. Steinheil, 1899. [Prix, 0 fr. 75.]

THIS little pamphlet furnishes us with an excellent epitome of the facts which have been discovered concerning the value of the various extracts of the organs of the animal body. The methods of their production and administration are also given.

Leitfaden der Elektrodiagnostik und Electrotherapie. Für Praktiker und Studierende. Von Dr. Tony COHN, Nervenarzt in Berlin. Mit 6 Tafeln und 30 Abbildungen im Text. Mit einem Vorwort von Prof. Dr. E. MENDEL in Berlin. Berlin: S. Karger, 1899. Pp. 139.

THE author of this excellent guide to the therapeutic and diagnostic uses of electricity has endeavored to give within a moderate compass those portions of the subject which are more especially practical and useful to the student and the practitioner of medicine, without burdening the work with theories or making it too abstruse. The accomplishment of this purpose has been much aided by an ingenious series of diagrams of the course of the superficial nerves; while covering these, but not obscuring the outlines, are sheets of transparent paper with the points for the application of the electrodes indicated in red ink. By this means the anatomical value of the drawings is in no way interfered with, and the areas for nerve stimulation are seen at a glance. The whole book shows the hand of the experienced teacher and practitioner.

A Treatise on "Unripe" Cataract. By WILLIAM A. M'KEOWN, M. D., M. Ch., Surgeon to the Ulster Eye, Ear, and Throat Hospital, Belfast, etc. Illustrated by Nine Plates, containing Sixty Original Drawings. London: H. K. Lewis, 1898. Pp. x + 13 to 202. [Price, 12s. 6d.]

THIS book is based entirely upon the author's own personal experience and work, which is a great advantage to the reader in forming an opinion upon the value of the methods of treatment. Fifteen years ago Dr. M'Keown advocated irrigation of the anterior chamber for the removal of lens fragments after cataract extraction. In this book he advocates the removal of "unripe cataracts," aided by this irrigation of the anterior chamber. He considers it much more efficient in removing fragments of cortex than any other method, and

addition it restores the frequent collapse of the cornea. It has also been his personal experience that the necessity of a subsequent capsular operation occurs only in a small percentage of the cases. The author advocates an iridectomy in all cases of cataract extraction. His conclusions are based upon an experience of over seven hundred cases of various kinds, many of the histories of which are given briefly in chapter ix. He believes that he has proved satisfactorily that the introduction within the eye of a sterilized salt solution is harmless, and that irrigation with the fine needle inside the capsule of the lens in incomplete cortical cataract is a safe proceeding. The book is interesting, is honestly written, and will repay careful reading.

Ocular Therapeutics for Physicians and Students. By F. W. MAX OHLEMAN, M. D. (Minden, Germany), Late Assistant Physician in the Ophthalmological Clinical Institute of the Royal Prussian University of Berlin, etc. Translated and edited by CHARLES A. OLIVER, A. M., M. D. (Univ. Pa.), one of the Ophthalmic Surgeons to the Philadelphia Hospital, etc. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. xv+9 to 274. [Price, \$1.75.]

THE original edition of this work, in German, appeared in 1896. The American edition is much better fitted for the use of the American student and practitioner. It is well printed on good paper, and has an excellent index with cross references. It is divided into two parts, general and special. The first, or general, part contains five chapters, in which are considered massage, thermic agents, chemical agents, electricity, and general treatment. The second, or special, part is devoted to the therapeutics of the various diseases of the eye. The author has pursued the very wise course of avoiding the advocacy of any special treatment for a given disease, and mentions in full all well-known drugs and methods of treatment which have met the test of experience. More than two hundred different prescriptions are given in full in the metric system, with its equivalent in apothecaries' weights, the latter being an improvement on the German edition, which is the creditable work of Dr. Oliver. The little book will prove a very convenient work to refer to for a change in therapeutics, which is so frequently found necessary in practice.

Die mikroskopischen Untersuchungsmethoden des Auges. Von Dr. S. SIEGMANN, Augenarzt in Hamburg. Berlin: S. Karger, 1899. Pp. xvi+210. [Preis, Mark 6.]

THIS is a monograph devoted to a description of the various methods of preparing the eye for examination and of the various steps in microscopic technique. It is divided into two parts, general and special. The first part contains ten chapters, in which are covered the killing of the animal, the preparation and preservation of the eyeball, the cutting of sections and the mounting of specimens, the examination of the cornea, and the preparation of nerve tissue, muscle, and connective tissue specimens. The second part is devoted to the examination of the different parts of the eye—cornea, sclera, iris, ciliary body, retina, choroid, and lamellae, vitreous, connective tissue, and the optic apparatus, muscles, blood vessels, and the optic nerve. There is also a chapter on the diseases of the eye, and a chapter on the interior of the eye. The book is very interesting but

the work is well printed and will be a great convenience to all who are interested in the preparation of microscopic specimens of the eye for study.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, etc. With Two Hundred and Fifty-five Illustrations and Two Chromolithographic Plates. Third Edition, thoroughly revised. Philadelphia: W. B. Saunders, 1899. Pp. 7 to 696. [Price, \$4.]

A THIRD edition within six years speaks well for the success of this work, and it may properly be termed popular. Much new matter has been added, and a great deal of attention has in particular been devoted to the bacteriology of the conjunctiva and cornea, a subject of great interest and importance. Many articles have been largely rewritten. Local anesthesia, with a comparison of the effects of eucaine and holocaine, receives due mention. New paragraphs on favus of the eyelids, schizomycetial infection of the cornea, oyster-shucker's keratitis, and other subjects have been inserted, and the whole work is well abreast with our constantly advancing science. This is one of the best books on ophthalmology published in our language.

Radioscopie et radiographie cliniques. Par le Dr. L. R. RÉGNIER, Chef du laboratoire d'électrothérapie et de radiographie de l'hôpital de la Charité. Avec 11 figures dans le text. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 95.

THE methods of application of the Röntgen rays have been presented in a much more satisfactory way than in the present volume, which contains little that is of value. It is merely one of the many small volumes which follow any new discovery.

BOOKS, ETC., RECEIVED.

Cyclopedia of the Diseases of Children; Medical and Surgical. The Articles Written Especially for the Work by American, British, and Canadian Authors. Volume V. Supplement. Edited by William A. Edwards, M. D., Illustrated. Philadelphia: J. B. Lippincott Company, 1899. Pp. xvi-1332.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otolaryngology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Justin Daland, M. D. (Univ. of Penna.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc.; J. Mitchell Bruce, M. D., F.R.C.P., London, England, Physician to and Lecturer on the Principles and Practice of Medicine in the Charing Cross Hospital; and David W. Finlay, M. D., F.R.C.P., Aberdeen, Scotland, Professor of the Practice of Medicine in the University of Aberdeen, etc. Volume IV. Eighth Series, 1899. Philadelphia: J. B. Lippincott Company, 1899. Pp. xii 375.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare,

M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Volume I. March, 1899. Surgery of the Head, Neck, and Chest—Diseases of Children—Pathology—Infectious Diseases, including Croupous Pneumonia—Laryngology and Rhinology—Otolaryngology. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. viii-17 to 490.

The Serum Diagnosis of Disease. By Richard C. Cabot, M. D., Physician to Out-patients, Massachusetts General Hospital. New York: William Wood & Co., 1899. Pp. vii-154. [Price, \$1.50.]

Essays for Students. By Stephen Paget, F.R.C.S., Surgeon to the West London Hospital, etc. New York: William Wood & Co., 1899. Pp. 7 to 177.

Respiratory Exercises in the Treatment of Disease. Notably of the Heart, Lungs, Nervous, and Digestive Systems. By Harry Campbell, M. D., B. S. Lond., Fellow of the Royal College of Physicians, London, etc. New York: William Wood & Co., 1899. Pp. viii-200.

A Handbook of Obstetric Nursing for Nurses, Students, and Mothers. Comprising the Course of Instruction in Obstetric Nursing given to the Pupils of the Training School for Nurses connected with the Woman's Hospital of Philadelphia. By Anna M. Fullerton, M. D., Obstetrician, Gynecologist, and Surgeon to the Woman's Hospital of Philadelphia, etc. Fifth Revised Edition, Illustrated. Philadelphia: P. Blakiston, Son, & Co., 1899. Pp. xiv-17 to 262. [Price, \$1.]

Surgical Nursing. By Bertha M. Voswinkel, Late Nurse-in-Charge of the Children's Hospital, Columbus, Ohio. Second Edition, revised and enlarged. With One Hundred and Twelve Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. xvi-11 to 206. [Price, \$1.]

Diagnosis by the Urine, or the Practical Examination of Urine, with Special Reference to Diagnosis. By Allard Memminger, M. D., Professor of Chemistry, Urinology, and Hygiene in the Medical College of the State of South Carolina, etc. Second Edition, enlarged and revised. With Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. viii-9 to 124. [Price, \$1.]

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Metre Distance with the Plane Mirror. By James Thorington, M. D., Adjunct Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Third Edition, revised and enlarged. Forty-three Illustrations, Twelve of which are Colored. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. xviii-19 to 86. [Price, \$1.]

Twenty-third Annual Report of the Managers and Officers of the New Jersey State Hospital at Morris Plains. For the Year ending October 31, 1898.

Twenty-ninth Report of the Alexian Brothers' Hospital, St. Louis, Missouri.

Report relating to the Registration of Births, Marriages, and Deaths in the Province of Ontario. For the Year ending December 31, 1897.

Digestive Ferments, with Especial Reference to the Effects of Food Preservatives. By Henry Leffmann, M. D. [Reprinted from the *Journal of the Franklin Institute*.]

Perichondritis and Necrosis of the Arytlenoid Cartilage. By W. Scheppegrell, M. D., of New Orleans. [Reprinted from the *Annals of Otolaryngology, and Rhinology*.]

Lymphosarcoma of the Mesentery. By Maximilian Herzog, M. D., of Chicago. [Reprinted from the *Journal of the American Medical Association*.]

A Case of Lymphangioma Cysticum. By A. E. Halstead, M. D., and Maximilian Herzog, M. D., of Chicago. [Reprinted from the *Chicago Medical Recorder*.]

Miscellany.

The Tri-State Medical Society of Iowa, Illinois, and Missouri.—The seventh annual meeting will be held in Quincy, Illinois, on Tuesday and Wednesday, April 4th and 5th, under the presidency of Dr. C. E. Ruth, of Keokuk, Iowa. The programme includes the following titles: Paroxysmal Tachycardia, by Dr. A. S. Mackey, of Louisiana, Missouri; A Case of Brain Tumor Presenting chiefly Ocular Symptoms, by Dr. James M. Ball, of St. Louis; Glaucoma, by Dr. R. M. Lapsley, of Keokuk, Iowa; Diseases of the Nasal Sinuses and Middle Ear as seen in la grippe, by Dr. F. A. Boucher, of Marshalltown, Iowa; La Grippe, by Dr. O. F. Pile, of Memphis, Missouri; The Treatment of Adenoids and Turbinate Hypertrophies, by Dr. A. E. Prince, of Springfield, Illinois; The Treatment of Endometritis, by Dr. J. C. Murphy, of St. Louis; The Indications and Contraindications for Hysterectomy in Uterine Fibroids, by Dr. M. B. Ward, of Kansas City; The Curative Action of Ergot upon Certain Uterine Myomas, by Dr. Henry T. Byford, of Chicago; Uterine Fibroma, by Dr. F. B. Dorsey, of Keokuk; Uterine Fibroma, by Dr. C. B. Campbell, of St. Joseph, Missouri; Suprapubic Lithotomy, by Dr. J. J. Brownson, of Dubuque; The Treatment of Retroversion of the Uterus, by Dr. F. H. Martin, of Chicago; The Results of Neglected Cases of Cervical Laceration, by Dr. Joseph B. Bacon, of Chicago; Early Surgical Interference per Vaginum in Pelvic Inflammation, by Dr. D. E. Monash, of Des Moines; Some Uses of the Actual Caustic in Gynaecological Therapeutics, by Dr. O. B. Will, of Peoria, Illinois; Abdominal Incision and Suture, by Dr. Francis Reider, of St. Louis; Some Uses of Esmerich's Bandage, by Dr. T. J. Maxwell, of Keokuk; The Latest and Most Successful Treatment of Tetanus, by Dr. E. Lamphar, of St. Louis; Strangulated Hernia: A Successful Operation on a Patient Eighty Years of Age, by Dr. A. W. Williams, of Quincy, Illinois; The Diagnosis of Surgical Diseases of the Kidneys, by Dr. A. H. Cordier, of Kansas City; Movable Kidney, by Dr. Lewis Schouler, of Des Moines; Decapsulation of the Kidney for Special Pathological Conditions, by Dr. A. H. Ferguson, of Chicago; Bone-splitting: A Conservative Measure in the Surgery of the Hand and Foot, with a Report of a Case, by Dr. A. H. Meisenbach, of St. Louis; The Treatment of Fracture of the Thigh, by Dr. Edward Borek, of Rock Bud, Illinois; Esophagotomy, by Dr. C. H. McGee, of Unionville, Missouri; Nerve Exhaustion, by Dr. J. F. Herrick, of Ottumwa, Iowa; Self-intoxication, by Dr. S. K. Davis, of Libertyville, Iowa; The Dietary of Infants, by Dr. F. B. Miller, of Kahoka, Missouri; Professional Perplexities, by Dr. George P. Neal, of Fort Madison, Iowa; The Bacteriology of the Female Genital Tract, by Dr. W. B. LaForce, of Ottumwa, Iowa; Ureic Acid and its Serious Results when not Eliminated, by Dr. M. S. Marey, of Peoria, Illinois; The Status of Typhoid Fe-

ver, by Dr. J. E. Parrish, of Memphis, Missouri; Gangrene from Carbolic Acid, by Dr. H. A. Leipziger, of Burlington, Iowa; The Surgical Treatment of Habitual Criminals, by Dr. A. J. Ochsner, of Chicago; The Application of Cold Water to Allay Persistent Vomiting, by Dr. W. F. Mitchell, of Lancaster, Missouri; Tuberculosis treated with Large Doses of Creosote, by Dr. J. H. Coulter, of Summittsville, Iowa; Misconceptions concerning Locomotor Ataxia, by Dr. John Puntton, of Kansas City; Pneumonia, by Dr. Elmer Lee, of New York; Pneumonia, by Dr. J. T. Lambert, of Farley, Iowa; Pneumectomy: its Possibilities as the Future Treatment of Incipient Pulmonary Tuberculosis, by Dr. John S. Pyle, of Toledo, Ohio; Gallstones, by Dr. D. C. Brookman, of Ottumwa, Iowa; City Mortality Statistics, and what they should Teach Us, by Dr. F. M. Fuller, of Keokuk; Epidemic Cerebro-spinal Meningitis, by Dr. R. C. Berry, of Clermont, Iowa; The Surgery of the Gall Bladder, by Dr. J. R. Hollowbush, of Rock Island, Illinois; Enterorraphy, by Dr. J. L. Skelly, of Pekin, Illinois; Intestinal Constipation and its Etiological Effects, by Dr. H. C. Markham, of Independence, Iowa; Pelvic Reflexes, by Dr. F. B. Robinson, of Chicago; Remarks on Appendicitis, by Dr. J. F. Percy, of Galeburg, Illinois; Puerperal Eclampsia, by Dr. R. B. Turner, of Canton, Missouri; and Melano-sarcoma, with a Report of a Case, by Dr. T. B. Ellis, of Bethany, Missouri.

The Late Dr. Willard A. Heacock.—At a meeting of the Harlem Medical Association held March 13, 1899, it was unanimously

Resolved, That this association has learned with deep regret of the recent death of their co-member, Dr. Willard A. Heacock. His early demise fills us with sorrow, as we are confident that a brilliant future awaited him, because of his assiduous attention to his life work.

Resolved, That these resolutions be spread on the minutes of this association and published in the medical journals, and that a copy be sent to his family.

[Signed.] EMIL MAYER, }
A. C. GOODMAN, } *Committee*
E. J. GRAFF, JR., }

The Late Dr. Frank Archer Bottome.—At a meeting of the Harlem Medical Association, held February 13th, it was unanimously

Resolved, That the members of this association deeply deplore the sudden and untimely death of their fellow-member and co-worker, Dr. Frank Archer Bottome.

Resolved, That we, his associates, express deep regret at the loss of our esteemed colleague and genial friend.

Resolved, That we tender our heartfelt condolence to his family, and be it further

Resolved, That we cause this expression to be sent to the medical journals of this city.

[Signed.] JOSEPH F. LAMBEAU, M. D., }
Chairman,
A. R. CARMAN, M. D., }
MALCOLM M. LEAN, M. D., }

Committee

Exit "Husa." We lately announced that Professor John Uri Lloyd, of Cincinnati, was about to present the results of his examination of "Husa" at a joint meeting of the Cincinnati Society of the American Chemical Society and the Cincinnati Academy of Pharmacy. He did so on March 1st, and he has been kind

enough to send us a copy of his communication. It appears that "husa" is obtainable only in the form of a preparation which is a liquid, for the promoter of this alleged cure for the morphine habit declines to furnish the plant from which it purports to be made, *Viola sagittata*. Professor Lloyd sums up as follows: " *Viola sagittata* is not an eclectic remedy, for the reason that the name does not occur in eclectic literature, and the drug is not employed by eclectics. 'Husa' is said by Dr. Winthrop to be an undetermined plant (unknown to science), found by two plumbe bird hunters and gathered by them by the boat-load. My investigation of 'husa,' as sold by its discoverer to his professional patrons, is to the effect that 'husa' is a liquid containing large amounts of sulphate of morphine, some salicylic acid, some alcohol, water, glycerin, and coloring matter, probably burnt sugar." At the meeting Professor Lloyd demonstrated the accuracy of his statements, which, for that matter, nobody would question. And so it seems settled that "husa" must be set down as a factitious product, along with "gleditschine" and a few other examples of the class.

The Sixth International Otological Congress is to be held in London from August 8th to 12th, under the presidency of Dr. Urban Pritchard. The British organization committee, which numbers over seventy members from Great Britain and the colonies, has Mr. A. E. Cumberbatch for its treasurer and Mr. Crosswell Baber for secretary general. It has also appointed the following subcommittees, viz.: 1. *Reception*, vice-chairman, Mr. Field; honorary secretary, Mr. R. Lake. 2. *Election*, vice-chairman, Dr. Dundas Grant; honorary secretary, Mr. P. Macleod Yearsley. 3. *Dinner*, vice-chairman, Mr. Mark Howell; honorary secretary, Mr. L. A. Lawrence. 4. *Museum*, vice-chairman, Mr. C. A. Ballance; honorary secretary, Mr. Arthur H. Cheate. The president elect is chairman of all the subcommittees.

The meeting will be held at the Examination Hall of the Royal College of Physicians of London and Royal College of Surgeons of England, and the following details have been arranged: On Monday evening, August 7th, a preliminary reception will be held by the president elect. On August 8th, 9th, 10th, and 11th, the congress will be in session, and this will be followed on Saturday, August 12th, by an excursion for members and their lady friends. The official languages of the congress are English, French, German, and Italian.

The subscription, to include a copy of the *Transactions*, is fixed at £1, to be paid to the treasurer, Mr. A. E. Cumberbatch, 80, Portland Place, London, W., before the opening of the congress.

The subject chosen for special discussion is Indications for Opening the Mastoid in Chronic Suppurative Otitis Media, which will be introduced by Professor W. Macewen, of Glasgow, Dr. H. Knap, of New York, Dr. Luc, of Paris, and Professor Poltzer, of Vienna.

A museum of specimens and instruments relating to otology, shown by members, will be held during the meeting. Communications regarding the museum should be addressed to Mr. A. H. Cheate, 117, Harley Street, London, W.

Intending members of the congress are requested to send in their names to the honorary secretary general as soon as possible, and in any case not later than May 1st. Titles of communications, together with a short abstract of the same, should be sent to the honorary secretary general by the same date. According to the regulations

of the congress, no papers shall exceed fifteen minutes in reading; therefore all long communications should be read in abstract.

The German Medical Society of the City of New York.—At the next regular meeting, on Monday, April 3d, Dr. W. Freudenthal will present a case of osteosarcoma of the nose and upper jaw; Dr. H. J. Garrigues will show a specimen of a perfectly preserved urachus in a woman forty-six years old; Dr. A. Rose will read a paper on The Tern Appendicitis and other Unscientific Words of our Nomenclature; and Dr. A. Stein and Dr. Henry J. Wolf will report their experiences in appendicitis.

Erratum in a Therapeutic Note.—A correspondent has kindly called our attention to an evident error in the formula entitled Suppositories for Cystitis, published in our issue for March 11th, on page 341. For "15 grains" each of extract of belladonna and extract of opium, substitute $\frac{1}{2}$ grain, and, since the American extract of belladonna is stronger than most European extracts, the amount of that drug should be still further reduced, to $\frac{1}{4}$ of a grain we should say.

"Music hath Charms," etc.—The *Cincinnati Lancet-Clinic* for February 25th quotes the following from the *Medical Press and Circular*:

A correspondent sends the following festive effusion:

It has been suggested that music might prove a useful adjunct (in some cases, at least) where the usual routine treatment by medicine had not proved satisfactory. I venture to suggest the following well-known airs as being suitable for the cases enumerated, viz.:

Retarded labor from inertia: "Coming through the rye."

Chronic aphonia: "The lost chord."

Melancholia: "The heart bowed down."

Epilepsy: "Let me like a soldier fall."

Cases of chronic deafness: "Come back to Erin."

Pyrexia: "McCoolin."

Cases of doubtful diagnosis: "Oh, dear, what can the matter be?"

We might suggest as additions the following:

Scarlet fever: "The lads in red."

Noises in the ears: "Tarara-boom-de-ay."

Isolation cases: "I'm so lonely."

Illegitimate pregnancy: "I have a silent sorrow here."

Nervous depression: "Cheer, boys, cheer."

Alcoholism versus Opium Using.—Dr. T. J. Happel (*Memphis Lancet*, March), in an article on The Opium Curse, and a Preventive, says that a native Chinese preacher, in comparing the two vices, stated that he found this one striking difference between the effects of the opium vice among his countrymen and those of alcoholic intemperance among Americans: "When the Chinese opium smoker comes home at night he does not abuse his children and kick his wife—his wife kicks him."

"The Clothes they Left Behind Them."—According to the *Western Medical Review* for March 15th, a professor in an Edinburgh college, who was advocating athletic exercises for students, asserted that the youths of Rome used to swim three times across the Tiber before breakfast. One of his listeners laughingly replied: "Then they must have left their clothes on the wrong bank at the end of their swim."

Original Communications.

ERRORS THAT I HAVE MADE IN TWO HUNDRED AND TWENTY-EIGHT CONSECUTIVE CASES DIAGNOSTICATED AS APPENDICITIS.*

By ROBERT T. MORRIS, M. D.

THIS report includes only the cases in which I operated. A number of other suspected cases of appendicitis were seen in consultation during the time covered by the report. These were not operated upon because I eliminated the diagnosis of appendicitis, or awaited the development of more definite evidence. The cases in which a diagnosis of appendicitis was eliminated were chiefly of three sorts. First: So-called lithæmia cases with subacute inflammation of the lymphoid structures of the appendix and cæcum. Second: Cases of neuralgia of the ilio-inguinal and ilio-hypogastric nerves of the right side. Third: Cases of acute colitis, associated usually with intestinal fermentation. These three conditions are readily differentiated from appendicitis by any one who pretends to be expert at palpation. Perhaps I should say expert at abdominal palpation. I have seen many well-trained diagnosticians fail to follow any method of examination which would insure correctness of diagnosis in appendicitis cases. Failures of this sort will become less and less, because diagnosticians who wish to become expert at abdominal palpation will give themselves opportunities for becoming proficient.

The cases in which a diagnosis of appendicitis was deferred were chiefly cases in which palpation did not elicit peculiar testimony. For instance, cases of atypical typhoid fever with ill-defined eruption; cases of renal colic with spasm of abdominal muscles and tenderness of right abdominal viscera on palpation; cases of irritation in the appendix region due to normal involution changes in the appendix. In the latter class of cases the lymphoid layer of the appendix is gradually replaced by connective tissue, and as the connective tissue contracts it makes almost continuous impression upon the crushed nerve filaments. I removed one such appendix, and on that diagnosis, the patient being a physician who was fully competent to decide what he wanted to have done. I have always been opposed, however, to the idea of removing appendices unless they were the seat of definite infective lesions. There are two reasons for my position. First, in the interest of the patient. The death-rate of any surgical operation can not be reduced to zero, and I have always, in speaking and in writing, opposed the idea of disturbing the ap-

pendix unless its tissues were the seat of infective disease at the time of operation. Second, as a matter of personal interest I like to be spared the mortification of an error in diagnosis when the specimen is brought into evidence in the presence of assistants and other spectators. Besides the involution case, there were two other cases in which I thought it best to operate, though the appendices were not infected. These were cases of torsion of the appendix, with inclusion of mucus, and with symptoms of nausea and of local discomfort.

There was only one case in which I found appendicitis where something else was looked for. In an elderly woman, whose case was shown before my class at the college as an example of cancer of the cæcum, I found on operation a chronic abscess dependent upon a perforated appendix and an escaped concretion.

There was one case in which a patient gave a clear history of repeated attacks of appendicitis, but the urgent condition for which I was called to operate was found to be a strangulation of ileum in an adhesion band at the site of the infected appendix. This case was on the border line of error in diagnosis; but in the series of two hundred and twenty-eight consecutive cases in which I operated there were only seven clear errors in diagnosis, as follows:

CASE I. Old Typhoid-fever Complications.—A young woman, thirty years of age, about a year prior to date of operation had been confined to bed for several weeks with an acute abdominal inflammation, diagnosed as typhoid fever with atypical symptoms. After convalescence the patient had periodical attacks of acute inflammation in the right iliac region, and her physician began to feel that he might have mistaken appendicitis for typhoid fever. When I saw the patient a year afterward there was marked tenderness in the appendix region, but adhesions prevented accurate palpation of the appendix. On operation I found a congested appendix free from adhesions. Adhesions about the cæcum and ascending colon were separated, and the appendix was removed. This on microscopical examination proved to be entirely normal. The patient made a good recovery, and was relieved from the serious constipation that had been dependent upon adhesions. The original acute local peritonitis had probably followed the breaking down of a Peyer patch during an attack of typhoid fever.

CASE II. Peritoneal Tuberculosis.—A young woman, twenty-five years of age, had suffered for two years with symptoms of recurrent attacks of appendicitis. I saw her during the subsidence of an acute attack, and on operating found general peritoneal tuberculosis, involving the appendix. The appendix was removed in the belief that it had furnished the focus for tuberculous infection, but on microscopical examination it proved to be normal, excepting that its peritoneal coat was studded with milary tubercles. As a result of operation, the patient recovered from her tuberculous peritonitis.

CASE III. Cancer of Cecum.—A man, thirty-six years of age, had suffered for several months with constant pain and tenderness in the right iliac region, with occasional acute exacerbations of inflammation. On

* Read before the Society of Alumni of Bellevue Hospital, December 7, 1898.

palpation a round, hard mass was discovered in the appendix region. I operated and found a carcinoma of the appendix involving a part of the cæcum. I removed the appendix and cæcum and made lateral anastomosis of bowel. Nearly two years elapsed before recurrence of carcinoma appeared. Within four years I made four resections of bowel, and the patient continued to attend to his business until recently, when general infection of abdominal viscera developed. As a result of this mistake in diagnosis the useful part of the patient's life was apparently prolonged for more than four years.

CASE IV. Adhesion, Congestion of Appendix.—A young woman about thirty-four years of age had occasional attacks of appendicular colic. She had suffered from metritis and salpingitis. On operation the appendix was found to be adherent to the right Fallopian tube, and it was tense with interstitial exudation; but on removal and macroscopical examination the structures of the appendix were found to be evidently normal. Local peritonitis of the right oviduct had extended to involve the peritonæum of the appendix.

CASE V. Hysteria.—A young woman, seventeen years of age, gave a typical history of repeated attacks of appendicitis. She had been seen by a number of physicians in different cities, and all had agreed upon the diagnosis of appendicitis. She was brought to New York on a mattress. On examination I found the abdomen too tense for accurate palpation, but there was strong presumptive evidence of general peritonitis, believed to be tuberculous in character and resulting from infection from an appendix focus. The history of subjective symptoms, as given to me by the patient, was without a flaw in evidence. On operation I found appendix and peritonæum perfectly normal and not inflamed at all. The appendix was not removed. The patient had recovered from all symptoms of peritonitis on the day after operation, but she showed various other hysterical demonstrations before leaving the hospital.

CASE VI. Pneumonia.—A woman, forty-five years of age, was attacked with symptoms of acute peritonitis. Temperature, 105° F.; rigid abdominal muscles. Intense pain and local tenderness in right iliac region. She gave a history of previous lesser attacks of pain in the right inguinal region. On operation it was discovered that the appendix and right oviduct were bound together by adhesions. The appendix on examination was found to be normal. It had been caught in oviduct adhesions at some time previously. On the following day the patient was found to have typical lobar pneumonia. She recovered. I was called to this case by one of the most expert diagnosticians in this city. A few days later he showed me a precisely similar case of lobar pneumonia with abdominal symptoms, in a young man, for whom a correct diagnosis had been made.

CASE VII. Sequela of Measles.—A youth about ten years of age, nearly convalescent from an attack of measles, suddenly developed symptoms of acute peritonitis. Evidence was in favor of appendicitis, and at the time when I saw the patient he was believed to have general suppurative peritonitis. I opened the abdomen and found an apparently normal appendix, which was not removed. The peritoneal cavity was filled with viscid lymph, which escaped in large quantities. The peritonæum was thickened with infiltrates, but was not reddened as in acute infective inflammation. The patient slowly recovered from the peritoneal symptoms, and I

understand that he subsequently suffered in turn with pericardial, pleural, and meningeal exudation.

Apropos of these seven errors of diagnosis in two hundred and twenty-eight consecutive cases in which diagnosis was determined, I should like to inquire what other disease gives us so small an opportunity to go wrong. It seems to me that appendicitis is one of the most readily diagnosed of all diseases. Four of these seven patients were promptly benefited by the operation and none were really harmed, because the methods of operation that I prefer in appendicitis give patients very little to bear from the operation itself.

THE SIGNS OF INHERITED SYPHILIS.*

By ROBERT H. M. DAWBARN, M.D.,

PROFESSOR OF SURGERY IN THE NEW YORK POLYCLINIC SCHOOL AND HOSPITAL;
SURGEON TO THE NEW YORK CITY HOSPITAL.

THE subject of inherited syphilis is one in which the writer has always taken a special interest—beginning with a residence in the Nursery and Child's Hospital some sixteen years ago. The frightful mortality among children of syphilitic parents was reason enough for this interest, as well as the frequency with which it is met in practice by men of all specialties.

Fournier has more carefully than any one else collected the statistics as to mortality the world over, including the histories of more than six hundred inherited cases, and found that only one child in about four survived. The well-known Moscow list of two thousand cases, among whom only about the same small percentage escaped with their lives, must also be mentioned in corroborative evidence.

An immense majority of all these fatal cases died within their first year of life. On the other hand, of forty cases of *acquired* syphilis in the infant, all but one recovered under proper care.

Obviously, a prompt recognition is essential if treatment is to offer any hope to the congenital syphilitic. And it would therefore seem that a good purpose would be subserved in collecting in compact form as thorough a list as may be of clinical signs of real value and import. This I have herein tried to do, and will now present to you for criticism twenty-seven such diagnostic points. Obviously, not all have equal pathognomonic value; and yet not one has been included for which high authority can not be produced.

In our present "symposium" in the academy for the study of syphilis, several prominent men will write upon various phases of the pathology, including Dr. Jacobi, upon that of children. Therefore, and because my time as one of four speakers is necessarily extremely brief, I will to-night only discuss symptoms and diagnostic values, and these in the fewest words and with but a passing comment.

* Read before the New York Academy of Medicine, March 2, 1899.

A chronological order of involvement in this disease, when inherited, is quite wanting. The symptoms must therefore be designated simply as those which usually are early and those of later appearance. It is understood that the inherited type is that under discussion. Consequently, the initial lesion is not herein studied.

Naturally, we begin with an early group.

Quoting the famous Diday, Dr. J. L. Smith says:

1. "Next to the look of *little old men*, the most characteristic sign is *sallow color of the skin or café au lait*." This applies to the newborn. These little ones are very rarely plump. They are wrinkled to a degree that justifies Diday's graphic words. Still, it is not unknown that even a plump baby, when newborn, may shortly prove syphilitic.

2. I next mention a sign rarely alluded to, but given by a few good authorities. It is included at this early point not because of its prominent value, but because it is to be noted at once. This is an *umbilical cord* so extremely thick as to seem swollen, and also apt to be very long; and to be very slow in becoming detached from the navel. This swelling and unusual nutrition of the cord may be due to a partial *endophlebitis obliterans*, occasionally noticed, and involving the umbilical vein.

3. *Pemphigus Syphiliticus*.—The mortality is almost one hundred per cent. As if it were yesterday, I can remember my pride when, as a first-year student, I confined my initial case, twenty-one years ago. The baby was not much to look at, but then it was the outcome of my honest labor, helped somewhat by the mother, to be sure. Imagine, then, my indignation when, upon the third day, I found its buttocks, palms, and soles a mass of blisters! I accused the father, who was acting as nurse, of having carelessly placed his first-born, and mine, upon the stove since my last visit. This he feelingly denied. It did not occur to me to question him in another line. My preceptor, however, enlightened me as to the nature of the case, and advised me to treat the baby for syphilis, *secundum artem*—after which it would die. This I accordingly did, with the result predicted.

The *vesicular* syphilide—much rarer—occurs, as the name implies, in smaller blisters; and is commonly associated with a pustular eruption. Groups of the little vesicles form here and there, closely packed together. It is not so fatal a sign as pemphigus, but nevertheless indicates a severe type of infection.

It is worth noting that, although syphilis is so polymorphous in its skin manifestations, it is only in the early and inherited type that we find bulke or vesicles. Exceptions to this rule are very rare.

4. The *common eruption* in its most frequent early form is an erythema. The macules first appear upon the lower part of the abdomen and about the genitals, as a rule—pinkish early, later coppery in color. The rash is apt to show itself first about three weeks after birth.

Certain English writers allude to "syphilitic penny pieces," as descriptive of the appearance; but "farthing pieces" would be a little more nearly right: for in size, after becoming fully developed, they average that of the baby's finger nails.

Subsequent crops may show any and all syphilides, fully as polymorphous as, and more irregular in development than, acquired syphilis.

We should remember that in only about twenty-five per cent. of the cases of inherited syphilis do we find any eruptions at all.

5. *Condylomata* are often seen early, and at the mucocutaneous junctions, and also where there is chafing and moisture of the skin. The commonest seat is at the anus.

6. "*Snuffles*" is one of the commonest signs—due to coryza syphilitica, or later on, to a true ozæna. Coryza of the newborn is exceedingly suspicious always, say Ashby and Wright.

7. The same pathological changes in the larynx—i. e., mucous patches, ulceration, or later on, gummatous involvement at times, are responsible for the characteristic hoarseness of the crying and of the speaking voice.

8. *Mucous patches* will be found quite often, and may be observed at times upon any of the mucous surfaces capable of inspection—the lips, mouth, anus, nose, larynx.

9. But even in the absence of such patches a *general stomatitis* and *pharyngitis* is an almost constant phenomenon in early cases of congenital syphilis, according to Holt. Ulceration is apt to appear later. A peculiar desquamation of the tongue has been at times noted too.

10. Sometimes there is a diagnostic value even in a negation; and as a distinguishing sign between the congenital and the acquired variety it is a striking fact, mentioned by a number of authors, that general lymph-nodular enlargement of the usual subacute and chronic kind is characteristically absent in the congenital type.

11. *Hæmorrhages*, while infrequent, are diagnostic when present. They may occur either from ulcerated or from apparently sound mucous membranes; or ecchymotic spots may develop, quite without traumatic cause, here and there beneath the skin.

12. Among visceral involvements, Virchow's term, "*a white pneumonia*," is worth remembering; due mainly to a fatty degeneration of the epithelium of the air vesicles. This pneumonia is the type occurring in the stillborn and those dying not long after birth. In older cases there may be an interstitial pneumonia, or else gumma of the lungs.

Of course, the "white pneumonia" is mainly of *post-mortem* diagnostic value. To be sure, it is suspicious to have a baby born with pneumonia disease, or to have this appear very shortly afterward; but the physical signs of the consolidation can not be said to differ from those of pneumonia otherwise induced.

13. *Involvement of the liver* is very frequent in congenital syphilis, and is due to diffuse interstitial hepatitis or to gummata, or occasionally to amyloid degeneration. A distinct enlargement, accompanying other signs, is suspicious. It may, of course, cause ascites, but is not accompanied by jaundice, which fact is interesting.

14. In newborn syphilitics the *spleen* is almost always involved, according to Holt. Gee, however, puts it as being enlarged in at least one half the cases. Whatever the exact proportion, it is plain that distinct enlargement of this viscus has great diagnostic value. Taylor states that, once begun, the growth is rapid—the size of the organ often being quadrupled in two or three weeks. There may, of course, be kidney involvement, too, but not in a way to enable us to differentiate it from nephritis of other source. This is also true of the pancreas.

15. Certain eye troubles are highly diagnostic. Of these, one, almost pathognomonic, is “*ground glass cornea*,” due to interstitial punctate keratitis, and with no tendency to ulceration.

Iritis, chorioiditis, retinitis, optic neuritis may also be found. But the first-named (keratitis) is the one of greatest diagnostic value.

16. Inflammation of the *middle ear*, by itself, can not be considered of much value; but when associated with certain other symptoms it is otherwise. Hutchinson's famous “*triad of symptoms*” are: notched teeth, ground-glass cornea, and otitis media (*Medical Record*, editorial, August 26, 1893). Hutchinson also mentions a suddenly and painlessly occurring deafness as being almost always of this nature, and may lead to deaf-mutism.

17. A rapidly occurring *alopecia* is suspicious of syphilis, and occurs as well in the inherited as the acquired, though by no means always.

18. Among rare signs, though of great value when present, must be mentioned a *painless orchitis*. The testicle may be handled and pressed with impunity.

19. *Neuroses* must not be forgotten, though infrequent and not occurring very early, as a rule. Chorea, epilepsy, hemiplegia, for example. As to epilepsy, Jackson urges that the brothers and sisters of an epileptic child should be most carefully examined (as well as itself) to determine whether syphilis is not the cause.

Regarding paralyses, it is enough to say that as *gumma* develops in the later stages of congenital syphilis, just as it does in the acquired, there may be any and all forms; and suddenly and quietly appearing paralyses should make us think of this disease before any other, as to a cause.

20. I have deferred a discussion of the sundry osseous signs until this point, not because they occur late, all of them, or are unimportant, but in order to study them in a group together. Among the commonest and earliest of all important signs is *osteo-chondritis*, involv-

ing the shafts and epiphyseal junctions of the long bones. Taylor says this is often the only sign; and that at other times its presence decides the syphilitic nature of coexisting lesions. It is usually found at birth or within a month later. The swellings are rather distinctly limited as a rule, and the child suffers when they are handled. Those of rickets are apt to occur much later, and to be more epiphyseal than in the cartilage and shaft. In bad cases there may finally occur separation of the epiphyses, suppurative osteomyelitis, and necrosis.

21. Later in appearance than osteo-chondritis is *syphilitic periostitis*. Perhaps as characteristic a sign as any from this source is the one called “*the nodes of Parrot*,” and described carefully in Moullin's *Surgery*. Here the two halves of the frontal bone and the two parietal bones are so thickened as to form distinct bosses, four in number, and surrounding the anterior fontanelle.

22. *Dactylitis syphilitica* (one variety of “*spina ventosa*”) affects mainly the first phalanges, and differs from the tuberculous variety in this regard, as also the fact that with syphilis as a cause it is apt to be multiple and symmetrical—that is, appearing on both hands.

23. The *finger nails* have sometimes peculiar forms of onychia. It may be ulcerative; but, in particular, there is one characteristic form—“*the claw*.” In this the root of the nail seems pinched transversely, being thus narrowed, and at the same time it thickens until its appearance earns the appellation given.

24. The *temporary teeth* are cut very early, of bad color, and liable to a crumbling decay. The upper central incisors of the milk set suffer first (Erichsen). It is curious how widespread, even to-day, is the belief that it means bad luck to have teeth at birth; and here, upon eminent authority, is a justification for the superstition. Twice in Shakespeare's play of Henry VI is this alluded to. When, in the Tower, King Henry taunts the hump-backed Duke of Gloster with being born with teeth, the latter considers it sufficient cause for stabbing him to death, which was in those days considered a witty repartee, as it was certainly an effective one.

25. *Hutchinson's Teeth*.—These famous signs are only found in the permanent set, it must be remembered. The upper central incisors are again the ones mainly involved, or at least most characteristic. The notching of their lower edge, and peg shape, or screw-driver shape, are familiar to all medical men. But not all cases of syphilis, either inherited or acquired, who reach the necessary age to have second incisors present Hutchinson's teeth. He has himself pointed out that it is found only in those who have had syphilitic stomatitis at an early age.

26. In late cases are found irregularities, hypertrophies, and asymmetries of bony development. In the face the *nose* is the characteristic deformity. This, due to necrosis, has shortened—the lower part retreating

toward the upper part; or else the bridge is sunken. (A most ill-omened sign, for when the bridge is quite gone, of course they can never get over it.)

The *tibia* is elsewhere the most characteristic of these late bony changes. It is greatly thickened; its crest being no longer a mere ridge, but it has become a wide surface, swelling forward so that a side view gives a characteristic *sabre shape*.

27. In conclusion, it is a matter of great interest, that may well detain us for a minute to examine into the stigmata of a syphilis which was active in early childhood, but now is either quiescent or cured. The tibial and other bony changes just mentioned come under this heading ultimately.

Chronic fissures about the lips often exist in late cases, and these leave diagnostic linear cicatrices there. Small scars upon the skin or mucous membranes of children no longer in infancy deserve study. When of this nature they are apt to be in outline curvilinear or crescentic, in groups, and not rarely are symmetrical upon the two sides. They are especially diagnostic when found upon the upper part of the legs. Such signs imply that the child once had a rather severe type of the disease, though now, perhaps, cured.

It is my hope that among the gentlemen of wide experience present to-night there may be enough difference of opinion as to the value of some among all these twenty-seven signs to elicit an interesting criticism and discussion. Perhaps, too, they may suggest yet other stigmata deserving of mention, but overlooked in this paper. In both of these ways I shall hope to profit, and for all suggestions shall be grateful.

THE DIFFERENTIAL DIAGNOSIS OF SYPHILITIC ERUPTIONS AND SIGNS IN THE SKIN OF FORMER SYPHILIS.*

By GEORGE HENRY FOX, M. D.

It is a startling statement, but it is nevertheless a fact, that syphilis is the only disease which every practising physician is called upon to treat, whether he is located in the city or in the country. Whether his patients are rich or poor, of the highest social rank or from the lowest walks of life; whether his practice is limited exclusively to men, to women, or to children; whether he is the typical "family physician" or the specialist devoting his attention to the diseases of a single organ of the body; whether, in fact, he desires to treat syphilis or not, he can not, by any possibility, escape the necessity of now and then encountering this protean disease, and often in a most unexpected manner.

In the recognition of syphilis through its various

manifestations the student of cutaneous diseases possesses a notable advantage. While, in most cases of syphilis affecting the internal organs, the nature of the disease is more or less obscure and can only be elucidated after a careful study into the history of the patient, in nearly every case of cutaneous syphilis the diagnosis of the disease is written upon the skin. It is usually written, too, in characters so distinct and plain that "he who runs may read."

In syphilitic disease of the eye, the throat, the nervous system, and other organs, there is often a lack of any characteristic signs indicating the origin of the malady. The diagnosis is of necessity based upon the history of the case, and is often a probability rather than a certainty. In cutaneous syphilis, on the other hand, the lesions usually present such striking and pathognomonic features that the specific nature of the eruption is at once apparent to the eye of the observer. What Nature has written upon the skin is often perfectly plain to even those who have only learned their alphabet in the dermatological clinic. There can be no doubt as to the purport of Nature's handwriting. There is usually no necessity to inquire into the history of the case, except for the purpose of verifying the diagnosis.

The diagnosis of cutaneous syphilis rests upon the basis of clinical experience. We recognize an elm tree, an oak, or a maple, not because we have studied Gray's *Botany*, but because we have seen these trees from the days of childhood and have unconsciously noted their characteristics as manifested in leaf and branch. Those who are able to distinguish at a glance a chestnut from a hickory tree (and I presume some of us are not) have doubtless made a slight effort to acquire this knowledge; while those who are able to name the majority of indigenous trees have acquired their diagnostic skill only by tramping through forests with open and inquiring eyes. In like manner the physician who has the skill to instantly recognize syphilis whenever and wherever it may appear has gained this skill not in the library, but in the clinic. However valuable lectures, books, and plates may be, it remains a fact that only through the careful study of actual cases can one become expert in the recognition of syphilitic eruptions.

Among the chief characteristic features of the syphilitic eruptions may be mentioned color, absence of itching, and peculiarities of configuration. The color of a syphilitic eruption, though often typical, is rarely to be depended upon as a basis of diagnosis. The absence of itching which, as a rule, is common to syphilitic eruptions, has a few notable exceptions. In every pustular eruption where the lesions are numerous, and superficial crusts have formed, a moderate amount of pruritus is frequently present. The peculiar configuration of most of the syphilitic eruptions constitutes the most characteristic clinical feature and serves as the most reliable basis of diagnosis. In the early eruptions, those occurring during the first year of the disease and usually during

* Abstract of a paper read before the New York Academy of Medicine, March 2, 1899, in the discussion on syphilis.

the first three months, the lesions, whether few or numerous, are disseminated over the greater portion of the body and are perfectly symmetrical. In the case of certain relapsing eruptions a tendency to a corymbiform arrangement or grouping of the lesions is often noted, but still the eruption on one half of the body is usually duplicated upon the other half. In the later eruptions, those occurring after the first year, this symmetrical arrangement of the lesions is lost, and it may be laid down as a rule that the further removed the eruption is from the date of the initial lesions the greater is this tendency to become unsymmetrical and limited to a small portion of the body. The late lesions of syphilis are characterized by a tendency to grouping; to the arrangement of the lesions in a circle; to the peripheral or serpiginous extension of patches; and to gummatous ulceration.

The determination of the fact that a patient has, at some previous period, suffered from syphilis is often a matter of supreme importance. There are so many diseases in which syphilis may be justly regarded as a possible aetiological factor that the proper treatment of the case often hinges on the fact of antecedent infection. To determine this fact, the physician is usually forced to rely upon either the history given by the patient or upon demonstrable evidences of preexisting disease. The history elicited even from an intelligent patient is often negative, and is always an insecure basis of diagnosis. Many a man, in clinic or private practice, will present a tubercular, squamous, or ulcerating eruption which is unmistakably syphilitic in nature, and yet he may have no knowledge or recollection of any initial lesion or previous eruption. In the case of women it is even more difficult to get a definite history of syphilis, except in cases of repeated miscarriages, for the initial lesion often remains undiscovered by the physician shortly after the time of infection, and eruptions, sore throat, alopecia, and arthritic pains are not always due to specific disease. The oft-repeated statement that lying is a pathognomonic symptom of syphilis may be jocose, but in my experience it is seldom true.

The careful examination of a patient with a view to the determination of previous syphilitic infection is likewise often negative, for in very many cases the disease runs its course with, or even without, treatment and leaves no perceptible trace. But in many cases there are evidences of former disease, which can only be discovered by stripping the patient and making a most careful search from head to foot. In no case is a physician ever justified in arriving at a positive conclusion, and much less in certifying to the fact that a patient, whoever he or she may be, is free from syphilis. All that he can possibly know, all that he can state positively, is that at the time of examination the patient present no manifestations of either present or past disease. He may justly assume that there is no probability of syphilis in connection with the case, but never can he

assert of any patient, unless it be himself, that there is no possibility of syphilis in the case.

The cutaneous indications of previous syphilis, when no late eruption is present, may be either pigmentary or cicatricial. Discoloration of the skin, especially upon the lower extremities, may be left for months and even years after syphilitic lesions have passed away, but rarely are they of much service in determining the previous existence of syphilis. Cicatrices, on the other hand, often declare this fact and remain as a permanent record throughout the lifetime of the patient. There is nothing absolutely characteristic of a single scar left by a syphilitic lesion, but the number of the scars found upon the skin, their location, and their peculiar arrangement often proclaim their origin beyond all shadow of a doubt. A small, rounded, smooth, white, and depressed cicatrix is said to be characteristic of syphilis, but a red-hot iron might produce a scar of precisely similar appearance. When, however, a few such scars are arranged in a semicircle, or many of them are found together in a group, the question of former syphilis becomes simply a matter of justifiable inference. The location of cicatrices is often quite as characteristic of their syphilitic origin as their peculiar configuration. For instance, when a small, rounded scar is noted upon the lower portion of the leg, we know that the ulcer which produced it may have been either of traumatic, eczematous, or syphilitic origin; but when one or more such cicatrices are seen upon the upper third of the leg, and especially upon the inner aspect of the calf, we know that the probability of eczema or traumatism having caused them is so very slight that we recognize them at once as almost unmistakable evidences of former syphilis.

[Dr. Fox had a series of lantern-slide illustrations thrown upon the screen, and pointed out the clinical features of psoriasis, eczema, lupus, and epithelioma, comparing them with syphilitic eruptions of similar appearance. He also showed illustrations of variola, lichen planus, ringworm, alopecia, and other non-specific dermatoses which bear a resemblance to syphilis. He said that these illustrations would speak more eloquently and more instructively than anything that he might possibly say upon the subject.]

THE TREATMENT OF SECONDARY SYPHILIS.*

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THE task assigned to me by the president in this symposium on syphilis is to present a succinct and practical consideration of the treatment of this far-reaching

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protean infection, and I shall try to accomplish this end on broad grounds.

Before considering the subject of treatment proper, it is very important to call attention to certain vicious therapeutic methods which still prevail to a certain extent, but which I think are slowly passing into desuetude.

About twenty years ago a most unfortunate reaction took place in the method of treating syphilis. Prior to that time it may be confessed that the method of using mercury was in general rather too lavish in its doses, and that in some cases harm was done. But as I look back the conviction forces itself on my mind that the old-time Ricord plan of treatment (in vogue prior to 1870) in which an active mercurialization for six months, supplemented with three months' liberal dosage with the iodide of potassium, was, with all its drawbacks and imperfections (chiefly salivation and intestinal derangement), far more beneficial than the attenuated, emaculated, narrow-gauge, stencil-plate methods of treating syphilis which then were adopted in France, England, and America. The reaction from the vigorous use of mercury was too radical, and I am sorry to say that we complacently accepted a method of treatment built up on theories and fantastic reasoning, which, in my judgment, has proved to be one of the most calamitous events in medical history. We hear little to-day in America of the ingenious and sophistical reasoning of the accomplished author of the interrupted treatment of syphilis, and there are few who wrestle with the labyrinthine problems of dose arithmetic, with its "full dose," "tonic dose," and "reserve dose," in administering mercury according to the tenets of the preposterous tonic treatment. But, although these ingenious theories are either entirely forgotten, or unknown to the present generation, the trail of the serpent is still visible in the routine methods followed by many in blindly relying upon the stomach ingestion of insoluble preparations of mercury in small doses. Happily for the human race, this slipshod, happy-go-lucky method of treatment is less and less followed every year.

In order that syphilis may be cured, it is necessary to introduce into the system a sufficient amount of mercury to act upon its poisonous products. Now, to take mercury into the stomach is not of necessity to introduce it into the system. Whatever mercurial agent is swallowed, be it the protoiodide of mercury, mercury and chalk, blue mass, the tannate, salicylate, or the dimethoacetate, all of these insoluble preparations must be acted upon in the intestinal canal and converted, in whole or in part, into peptonates or albuminates. In these forms they are taken up by the blood vessels and lymphatics, and by them distributed throughout the system. When the conversion of the ingested mercurial is perfect and in full quantity benefit occurs, and the syphilitic cells and toxins are favorably acted upon, and the auspicious condition prevails so long as the mercury

assimilation is perfect and its systemic distribution is thorough.

A consideration of these facts shows us what a great additional strain or burden is placed upon the intestinal functions, which not only have to assimilate for the support of the system the nutritive properties of the food ingested, but, in addition, two or three times each day to convert an indigestible and foreign drug into an assimilable chemical preparation.

Time will not permit me to go into all of the considerations involved in these minute processes, and I shall have to content myself by a succinct statement of what chemistry and clinical observation have shown to occur to syphilitic patients who for long periods have been submitted to mercurial treatment by the mouth. Chemical examinations have shown (and any one can ascertain the facts for himself) that when mercury does not produce gastro-intestinal derangement, a goodly amount of the drug is absorbed, as shown by its excretion in the urine and feces. When matters thus progress favorably the effect upon the syphilitic condition is beneficial, but as time goes on chemical examinations show that the quantity of mercury assimilated grows less and less, and that, though taken by the mouth, it is not absorbed, and that its therapeutic effect is then lost.

Now, clinical observation has clearly shown that for a time, in the early weeks of syphilis, a decidedly beneficial effect is produced upon the disease by mercury given by the stomach, but that in a few weeks the therapeutic action begins to wane and soon the remedy becomes inert. It is this temporary action of mercury given by the stomach, in long-continued and interrupted courses, which has brought to thousands of patients great trouble and suffering, misery, disaster, and death. They took the remedy long after it ceased to have any therapeutic effect, and the unextinguished infection kept right on its course of invasion and destruction. I scarcely know of a more difficult task than that of curing an old syphilitic who presents more or less distressing or dangerous lesions, for which he has long undergone an attenuated and prolonged mercurial stomach medication which kept him on the ragged edge and failed to dislodge his enemy.

I think I need add no more to this particular subject than to give the more recent utterances of the learned originator of the interrupted method of treatment of syphilis by small doses of the protoiodide of mercury. In 1870, he contented himself with the statement that two years and a half of this treatment were sufficient for the cure of syphilis. In 1889, he says that syphilis is an infectious, chronic, constitutional disease, diathetic, like gonorrhea and scrofula, and should have a lifelong treatment. Another author, of the same system of therapeutics, advocates a life-long cure, while still another eminent man of the same treatment should be indefinite. For my own part, I am convinced toward the close of the seventy-decennary of the century

that these treatments just considered were dire failures, and that they might, without exaggeration of speech, be termed curses of humanity. It is considerations like the foregoing which prompted me to use insoluble mercurial preparations only in the first few weeks of the secondary period, and then to use such efficient methods as would introduce into the system a sufficient quantity of mercury to act upon the syphilitic diathesis and not produce any depressing effect upon the general economy.

I will now succinctly describe what I consider an efficient and trustworthy method of treating and curing this chronic infective process.

In order to understand how to treat syphilis successfully, it is very necessary to have a clear idea as to its nature. Clinical observation and the analogical evidence presented by many infectious processes quite clearly indicate that syphilis is essentially due to a micro-organism, though such has not yet been demonstrated.

The poison of syphilis having been implanted upon the tissues of the infected person at once strikes for the vessels, and as a result there is marked distention of the perivascular spaces with small round cells, which produce a coat-sleevelike sheath around these tubes. The infective process thus beginning as a periphlebitis and periarteritis runs rapidly down the vessels, and within a few days the tissues far away from the chancre are honey-combed by these infected blood channels.

The process of syphilitic infection, therefore, is one of constant growth and diffusion from the beginning. In the very first days of the existence of the chancre the poison is deeply rooted in the subcutaneous tissue. It is in a most active state, and progresses along the course of the vessels until it reaches the body, and then infects the whole economy. In consequence, it is very certain that excision of the chancre will not cause the abortion of the disease. Reasoning by analogy, we are warranted in assuming that this new, highly infectious, and rapidly growing tissue gives off, probably by means of its microbes, a poison which diffuses itself through the system. We have, then, in syphilitic infection two orders of morbid changes: (1) The heterologous new cells; (2) the diffusible poison.

This, then, is the condition we have to treat, and the question arises, When shall active medication begin? My experience has taught me that the best results are always attained when treatment is commenced just as soon as the secondary manifestations show themselves. I am not a believer in the early mercurialization of syphilitic patients, for the following reasons:

1. My experience (and I am in accord with most advanced siphilographers) has taught me that when the morbid processes have so far advanced that a generalization of their products has occurred, syphilis may be said to be ripe, and then, and not till then, have we anything really tangible to treat. Mercury given before this critical cell distribution has very little to work

upon, and therefore is productive of a very limited amount of good. Indeed, to my mind, when given thus early, while it may have some influence upon local processes—on parts that are the seat of the chancre and the adjoining territory—it is productive of harm by influencing the tissues too early, which influence does not give them an immunity to the subsequent syphilitic process of invasion. In other words, mercury given before the generalization of syphilitic products does not favorably influence the resistance of the tissues to the impending invasion, and certainly does not render them immune to it. On the contrary, the early exhibition of mercury induces a condition of tolerance in the tissues which renders its action less powerful and effective at a later date when they are infiltrated with syphilitic products. In short, we remove the cutting edge of our most potent remedy by administering it to a system not as yet thoroughly charged with the virus which it is our hope to destroy. We are really treating before we have anything to treat.

2. Early treatment does not suppress or annihilate the disease, but simply retards the evolution of the secondary manifestations, and induces a subsequent disorderly course. On the other hand, by waiting until the disease is ripe and then beginning a vigorous course of treatment, it may be entirely cured, and no further manifestations may be seen or felt.

3. In most cases it is of great importance that the patient shall see for himself that he has syphilis, and when following the chancre he feels the enlargement of the neighboring ganglia and sees an unmistakable generalized eruption, he becomes thoroughly convinced that he is really syphilitic, and will then follow treatment in a systematic manner. On the other hand, if the patient only sees the chancre, and if the evolution of the secondary period is postponed by early mercurialization, he is very apt to think that he has escaped the infection, and will not follow treatment.

4. Errors in diagnosing genital lesions are so commonly made by the profession, owing to the fact that so many simple affections resemble the syphilitic chancre, that it is, as a rule, well to wait until the specific nature of the sore is confirmed by evidences of generalized systemic infection.

In this connection it is well to emphasize the fact that many men have been rendered unhappy for the balance of their lives in consequence of a false diagnosis of syphilis having been made upon some benign genital lesion.

5. No advantage or possible benefit to the patient is lost by withholding mercury until the onset of the second stage; nor is the patient thereby put in any jeopardy, present or future; nor are his chances for ultimate permanent cure in any way impaired, modified, or crippled. On the other hand, his syphilis will be more orderly and conspicuously more amenable to treatment; his physician will not grope in the dark, and will, if

he promptly attacks the disease in the conservative but vigorous manner soon to be detailed, be spared the hesitancy, doubt, and uncertainty of mind which are the inevitable lot of those who attack the disease prematurely.

The date, therefore (as a general rule), at which the treatment of syphilis should begin is that at which the disease culminates in the general infection of the economy—namely, just as soon as the general rash appears, together with the other manifold symptoms of the secondary period.

Too much stress certainly can not be laid upon the fact that in the early secondary stage there are certain conditions favorable to an active treatment—namely, a system virgin to mercurials and a greater susceptibility of the lesions to the action of mercury. This, then, is the most favorable time for efficient treatment, and it is the most critical one in the life of the syphilitic, for if the disease is attacked then its backbone may be broken. It is very probable that much of the late rebelliousness and malignancy of syphilis is due to the fact that the newly formed infecting granulation cells and the concomitant subacute inflammation, together with the diffusible toxins, induce in organs and tissues, particularly delicate ones, such as those of the nervous system, structural and nutritive changes which predispose them to subsequent low grades of inflammation and cell increase, besides, to a repetition of the essential syphilitic process. Therefore every effort should be made to destroy these young infectious cells and to remove them as quickly as possible from the parenchyma of organs and tissues before they shall have had time to induce these subtle and dangerous structural changes. In proportion as a systematic and vigorous mercurial course is entered upon late, so it is more and more heavily weighted in its action. There is no doubt whatever in my mind that a mercurial treatment covering the first six months of the disease is far more salutary and effective than a course extending over a year and more instituted later on.

It is important in the treatment of syphilis that the physician should have a good general idea as to the constitution of his patient. In a general way, it may be stated that the larger number of persons who contract syphilis are those who are young and in average good health. In a smaller number the standard of health is less high, and in some patients certain morbid conditions exist which are due either to disease or bad habits, and which lower their power of resistance.

There are many persons who, though not absolutely sick, are not really well. In this category are included cases of anæmia; flabby, and poorly nourished individuals; blonds with light reddish hair; persons suffering with malnutrition, and even those who are mildly neurasthenic. Then, again, we observe cases in which the health is impaired by worry and grief, by business cares, doubts, dreads, and excitements, also by insomnia. All such may be said to suffer from lowered vitality, and in

them syphilis is apt to run a more or less severe course. In the treatment of these cases we may not experience the quick response to the administration of mercurials; the manifestations may be rather slow in disappearing, and others may show a tendency to reappear. The cure, therefore, is not produced quite as quickly as in the benign cases, but, although the case may hitch and halt, neither physician nor patient should falter. In America syphilis in women runs about the same course that it does in men, but the female sex is much less frequently attacked by cerebral and cerebro-spinal affections than are men. Women, as a rule, are less addicted to alcoholics than males, and they are not called upon to overtax the brain as many men are, consequently they present rather infrequently evidences of specific nervous affections.

Syphilis in healthy persons, male and female, as a rule, runs a mild course, and its poison is eliminated from the system if active treatment is instituted at the proper time. Much depends upon the intelligence and docility of the patient, who, if he enjoys ordinary good health and will follow up energetic but very carefully directed treatment, may, I am confident, be cured. This comforting assurance may be given to the majority of patients seen in private practice, who, in general, are intelligent, realize the gravity of their condition, and resolve to so conduct themselves and regulate their habits that their vital processes can resist the depressing influence of the syphilitic poison and be able to undergo the strain put upon them by long-continued medication.

When we come to carefully study the treatment of syphilis proper, it is apparent that it is far from being a matter of routine or a mere problem of dose arithmetic. To be thorough and successful it must be based on broad principles, upon an accurate and full knowledge of the disease, and upon frequent and thorough study and observation of the patient. In the course of syphilis many conditions, exigencies, and complications are apt to arise, and the physician, to be successful in its cure, must be ready with all known modifications and expedients of treatment.

Assuming, now, that the patient has just presented evidences of the generalized manifestations of syphilis, the treatment is at once commenced. It is always well to begin medication in a manner that will not annoy, disgust, or discourage the patient, who is usually in a rather unhappy frame of mind at the thought that he is syphilitic and that he has quite a long period of treatment before him. Therefore, it is not well to be precipitate in the institution of an immunization treatment. Since in these early days mercury by the mouth is generally well borne, is effective in result, and is not distasteful to the patient, he may at once be put upon pills of the protoiodide of mercury, or of iodate of mercury, or of the thymoliodate of the same. In general, half-grain doses of these drugs may be given three times a day, and it will be rarely necessary to increase the daily

amount taken beyond two or three grains of any of them.

It is important that this initial course should be active and rather prolonged, and in attaining this end the case must be carefully handled and watched. As a rule, the physician can form a correct estimate as to the probable effect of mercury upon his patient within a week or ten days. Having put the stomach and intestinal canal in normal condition, and the mouth and throat having received proper attention, the dose of the mercurial may be increased within a few days to the quantity which acts vigorously on the lesions and does not disturb the well-being of the patient.

We must at this time assure ourselves that the indurated nodule has wholly disappeared; that the lymphatic engorgement shows evident signs of involution, and that the rash has faded or is fading. The throat and mouth must be inspected very often, and any red patches or ulcerative lesions must be actively treated. It is always a good rule as the rash is declining to discontinue the pills and to give the patient one or two courses of mercurial inunctions, by which the whole surface of the body will be acted upon by mercury. In this way any infectious cells which may be left over from a local or general rash may be acted upon and destroyed. Even while the patient is taking pills mercurial ointment may be used locally upon the lymphatic ganglia, due care being taken that an overdose is not given. In like manner papular and pustular lesions in hairy parts should be treated locally. The physician should always remember that all syphilitic lesions, even the most minute, are to be feared as possible sources of continuous or intermittent reinfection of the system. The morbid cells contained in these lesions are capable of great, even infinite, multiplication, and it can not be too clearly borne in mind that the so-called syphilitic relapses are due to the recurrence of these cell proliferations which develop from morbid foci left over at an earlier date.

By thus at an early date inducing the patient to use inunctions of mercurial ointment as an adjuvant treatment, it is seldom difficult, particularly with intelligent persons, to gain their consent to follow a full inunction treatment, and then the use of the pills may be discontinued. In proportion as the case progresses well the fear of the disease by the patient is dissipated and his morale improves. At this time the assurance on the part of the physician that the patient will be very much more benefited by systematic inunction treatment generally results in the patient's consent.

To be effective, the mercurial inunctions should be thoroughly administered over the whole body in regional parts, using about sixty grains of mercurial ointment. In some cases the inunctions may be administered on consecutive days; in others there may be intervals of one or two days between each. Usually after fifteen or twenty inunctions a period of repose may be allowed for

a week or two, since after such a course fully three or four weeks elapse before mercury ceases to be eliminated in the urine and feces.

During this initial active and energetic course we must take especial care of the patient's nutrition and be watchful of his well-being. If possible, change of air and scene at the seaside or the mountains should be enjoyed, and as much recreation indulged in as possible. The lighter the patient's cares and the less burdensome his condition of life the more auspicious will his progress toward cure be.

While a patient is undergoing this mercurial course he should have one or two warm baths each week on going to bed, in order to produce diaphoresis. When practicable, he should take Turkish baths, without the plunge, and after them should be made to sweat freely. At the seaside cold salt-water baths are very beneficial, and an occasional hot sea-water bath, followed by packing and a sweat, is a valuable adjuvant to mercurial treatment.

Since we know to-day that the cell proliferation of syphilis develops a diffusible poison which gives rise to various phenomena—fever, debility, emaciation, headaches, neuralgias, arthralgias, periosteal pains, splenic engorgement, and pleuritis—it has occurred to me that, besides the use of mercury, we should use at times, in combination, the remedy which seems a specific for these disorders—namely, iodide of potassium. Study and experience have taught me that we should not too long defer the administration of this valuable drug. Therefore, either synchronously or in the intervals of disuse of the mercurial frictions, we should give the iodide in goodly doses—ten, twenty, or thirty grains three times a day, or even in larger doses.

Then, again, it may be necessary, for various reasons, to suspend the inunction treatment for a long or short time, and in this event I do not go back to the pills, but use a strong mixed treatment, as follows:

R: Hyd. binod.	gr. ij to iv;
Potass. iodid.	ʒss. to ʒj;
Tinct. cinch. co.	ʒijj;
Aque	ʒj.
M. ʒj ter in die ex aqua ʒj.	

In this way we can push along until six months have elapsed from the date of the onset of the secondary period of syphilis, during which time the patient has taken medicine more than five months. In most cases, if this carefully regulated and most effective treatment has been followed, an examination of the patient will show that he presents no evidence of the disease, and that his condition is most satisfactory. As I have said before, it is evident that the backbone of the disease has been broken. Then the patient may have a respite from medicine for two or three weeks. At the expiration of this time the treatment must be kept up for three months longer, and it must consist of alternations of the inunction treatment and the dosage with a mild or

strong mixed treatment. As a cure progresses the intervals between inunctions may be longer and the mixed-treatment dosage may be less strong.

After the lapse of a year, in many cases, the necessity for treatment may not be apparent, and most of these patients say that they think they are perfectly well. It is better, however, not to take any chances, and during the second year, and perhaps a little longer, a few courses of inunctions and of the mixed treatment may be taken.

In the carrying out of this methodical general treatment of syphilis in the second year of the disease, the periods of dosage may on an average be stated at two to three months, with intervals of a rest of a month or six weeks. In this way about eight months are occupied by actual medication. In most cases at the end of the second year of thorough treatment patients may be pronounced cured, provided they have not for many months shown evidence of the disease, that their lymphatic system appears healthy, and their general health and nutrition are good.

With the foregoing considerations in mind, I see no reason whatever for altering the opinion that I have many times stated, that if an energetic and thorough treatment, such as I have sketched, be followed for two years or two years and a half, the patient will be cured, as shown by freedom from all syphilitic manifestations, by his or her ability to procreate healthy children, and by the enjoyment of permanent good health.

In addition to the foregoing methods of treating secondary syphilis, the physician should always be familiar with the technic of hypodermic injections of bichloride of mercury, and should use them as a reserve and expediency treatment. He should also bear in mind the fact that mercurial vapor baths have a limited but important sphere in the treatment of secondary syphilis.

THE TREATMENT OF SYPHILIS.*

By L. BOLTON BANGS, M.D.

THE disease called syphilis is still of untold interest. Its peculiar lesions, its liability to crop out after periods of quiescence, its non-limitation to any organ or tissue, but its capability of attacking all organs and tissues, and the mysterious appearance of its effects (so-called "sequela") many years after its acute stage has been forgotten bring it within the observation of all physicians. The specialist may, and probably does, see it mostly in its early and external manifestations; but when it assaults the internal organs, when symptoms are vague and obscure, and a careful and discriminating diagnosis is to be made, to whom then does it become an object of special study and interest but to the general practitioner?

There is also an attractiveness in its study because of our ignorance (or, rather, lack of positive knowledge) of its essential causative factor. Analogy and clinical study lead us to the conclusion that it is of microbic origin. To quote from White and Martin: "A number of bacteriologists have announced the discovery of this microbe, but convincing proof of the direct relation between the micro-organisms described and the specific lesions with which they have been found associated is still wanting." Without doubt further observation will provide us with this convincing proof. For the present we are able to maintain that after its introduction into the body this micro-organism or germ proliferates, sometimes enormously, but not *indefinitely*, for there is an apparent self-limitation to this as manifested by the cessation of symptoms and of contagiousness independently of any treatment. The multiplication of this germ produces such a reaction on the part of the tissues that not only is there elaborated a product which may be regarded as a protecting principle (*i. e.*, an "antitoxine"), but which also induces localized cellular inflammation exudates, with, in some cases, subsequent development of connective-tissue deposits. These localized cell accumulations interfere with the physiological function of the parts wherever situated, and, producing the various lesions of the disease, evidently contain the active principle or virus, for they and their discharges are contagious—certainly for two or three years.

Histological investigation of these products of syphilis shows them to consist essentially of immature cells in the walls of the lymph channels, in the parenchyma of the glands, and in and about the walls of the blood-vessels. These phenomena may be, and probably are, in response to the efforts of Nature to prevent and to repair damage to the tissues; but, as in many other of Nature's efforts when unaided by art, the results may be disastrous to the individual who is the subject of them. The object of treatment, as I understand it, is to prevent these cell accumulations if possible; to modify them and to hasten their involution or absorption, without injuring or weakening the healthy or fixed structures. Although syphilis manifests itself in many varying forms, from the mildest to the most severe or so-called "malignant" form, the fact that many individuals have passed through the acute stages of the disease without any treatment whatever, and have never afterward had any syphilitic evidences, warrants the belief that there is some quality in the (blood and) tissues which destroys the elements of infection and removes their pathological products. But, whether or not we can rely upon this quality to combat the infection and eliminate its toxins, experience has taught us that art *can* aid in the removal of their pathogenic results. From time immemorial almost, one drug has been the potent agent employed against syphilis—namely, mercury—and although, in my opinion, not an antidote, it

* Read before the New York Academy of Medicine, March 2, 1899, in the discussion on syphilis.

certainly does have the most efficient action upon the symptoms of the disease. So far as my knowledge goes, nothing has been presented in later times to disprove the statements of Headland in regard to the action of mercury, and upon these may be based a scientific reason for the use of the remedy. Headland long ago showed that mercury, when properly administered, produced a fatty degeneration of tissue, especially of the unstable or plastic effusions which took place in various diseases, and that the results of this fatty metamorphosis, being taken up by the lymphatics, was passed out of the body through the various excretory organs.

But it is not enough to say that a man has syphilis, and therefore he must take mercury. If we are to obtain the aid of the antidotal quality of the blood and of his tissues in general, he must be maintained at the highest possible level of health; he must not indulge in any of the things which are known to cause degeneration of tissue; in other words, his life must be a hygienic one through the whole course of his treatment. Although such a statement is in accord with experience, it is a general one, and may be modified according to the individual, for all physicians have met with patients—to be sure, robust, healthy, vigorous ones—who obstinately refused to follow the instructions of their medical advisers, and yet were apparently able to resist the progress of so infectious a disease as syphilis. It is these individuals who illustrate the self-limitation of syphilis above alluded to. Generally speaking, however, a hygienic mode of life is essential as the first step in treatment.

If, on account of some idiosyncrasy of the patient, mercury can not be given, other remedies which have a similar physiological action may be used; but mercury is the best and most potent, and indeed may be said to be the specific remedy for this disease. At one time potassium iodide was considered equally valuable, but clinical observation and scientific research go to show that while mercury admittedly produces this fatty metamorphosis to which reference has been made, iodine and its compounds merely stimulate the absorbents and hasten the elimination of the products obtained by the action of mercury. Even in the later stages of syphilis, the so-called tertiary period, and even when we have reason to suppose that the earlier granulomata have been followed by connective-tissue changes, mercury should be administered, but in combination with increasing doses of potassium iodide. The latter is, in my opinion, rarely indicated during the early stages of syphilis unless central or nerve lesions have occurred, or where a rapid elimination of the products of metabolism induced by the use of mercury is indicated. Then it should be administered only as an adjunct to the principal remedy.

In some individuals, besides mercury, it may be necessary to use other measures which produce tissue metamorphosis—such as hot baths, douches, massage,

ing, special exercises, and periodical changes of climate. To the latter, aided by hot baths, etc., I am inclined to attribute much of the rapid improvement which is obtained by patients who visit the various springs and other hydropathic resorts.

As to the best *method* of treating syphilis, I am free to say that the method must depend upon the nature of each individual case, remembering always that the patient is to be treated and not merely the disease. Although the foundation of the cure may be said to rest upon the fact that the patient is able to take mercury, whether by the mouth or by inunction, by vaporization or hypodermically, much will depend upon the idiosyncrasy of the individual and the skill and experience of the practitioner.

When and how shall we begin treatment? What shall be done for the initial lesion, and shall we at once begin constitutional (so called) treatment?

Notwithstanding all that has been said and written against excision of the initial lesion, I am inclined to practise the latter whenever the lesion is so situated as to make it feasible. Admitting that the disease is already constitutional when the initial lesion is first observed, experience warrants me in the statement that an infecting mass may be disposed of and the subsequent events of the disease may possibly be modified by early excision of the initial lesion. Whether we regard the primary adenopathy and the first macule of syphilis as the result of toxines produced by tissue reaction or not, I think we may fairly and reasonably look upon the initial lesion as a depot or reservoir from which the infectious elements were and yet may be started in their process of multiplication; therefore it ought to be removed. In some individuals the initial lesion is so situated that it can not be excised without a degree of mutilation which is unwarranted. On the other hand, domestic or social reasons may demand a speedy removal of the local lesion, which may be secured by excision and by securing primary union of the little wound.

Whether excision is practised or not, it is generally admitted, I believe, that the involution process of the initial lesion may be hastened by local applications to it of mercurial preparations, and by the *internal administration of the same remedy*. This leads me to the question, which has been discussed with more or less earnestness for some years—namely, whether we shall wait until the end of the second incubation period before beginning constitutional treatment, or whether we shall commence at once—i. e., as soon as the diagnosis of primary syphilis is determined. In my opinion, it is best to begin at once. Our objects, as stated in the earlier part of this paper, are, if possible, to prevent the disease from becoming severe; to interfere with the multiplication of the microbe bodies upon which it depends; to relieve the tissues of their cell accumulations, and to maintain the organism in as healthy and resisting a condition as we can. Our object is not to make a diag-

nosis and then wait for confirmatory proof, but to heal the individual who is diseased, who is infectious, and in whose body circulates a material which feeds and multiplies upon the tissues of that body. Why wait, if we have a means—call it what you please—an “antidote,” or a “germicide,” or an “alterative,” or what not; but if it is a means which has undoubted and admitted power, why not employ it at once from the very moment that we are certain that the individual has a disease it is our duty to combat?

If it is admitted, as it seems to be by the majority of syphilographers, that histologically all of the secondary manifestations of syphilis are found to be composed of the same cell accumulation, with perhaps the development of a few connective-tissue fibres, as compose the initial lesion itself, why should it be argued that there is “nothing to treat until generalization has manifested itself”? Again, if specific treatment of the initial lesion be warranted in particular cases, why is it not warranted—and indeed required—in all cases?

If, then, an initial lesion is present, and if specific treatment is good for it, why not begin at once the administration of that remedy which we know hastens the involution of those manifestations which belong to the so-called generalized or secondary stage? In my opinion, the effects of syphilis are due not only to the mechanical interference with the function of the part or parts where these exudates take place, but also to a systemic poisoning due to the elaboration and circulation of a toxine or ptomaine produced by the microbe body itself. If the vital forces of the individual are maintained at what might be termed a par of health, and all his functions kept at the highest point of activity, his economy is better able to take care of the toxines, while by the judicious administration of mercury his body is enabled to dispose of the granulomata or cell accumulations in their varying grades of intensity. This implies constant watchfulness, the exercise of careful, discriminating judgment, and, in some cases, ingenuity, on the part of the doctor, and on the part of the patient of obedience, confidence, and patience.

We know that the intensity of the disease depends not only upon the activity of the virus but largely upon the vulnerability of the individual himself, and we also know that by the too vigorous administration of mercury the healthy tissues of that individual are rendered less resistant to the inroads of syphilis. Thus may be substituted or added the toxic effects of the drug to the toxic effects of the disease, which, if left to itself, will in many cases, at least, pursue a certain chronological order, and, so to speak, finally wear itself out. Hence the object in view is to administer this potent remedy only for the purpose of assisting the economy to counteract the effects of the infectious principle and the toxines which it generates.

As to methods of administration: if the remedy is well borne when taken by the mouth, this is the prefer-

able mode. Only so much should be administered daily as can be digested easily and freely without interfering with stomach and intestinal digestion, but up to the point of the drug's physiological action. In the majority of cases an habituation to the remedy ensues, and therefore I am accustomed to make intermissions in the treatment from time to time; always, however, maintaining the hygienic and dietetic *status quo* of the person. It should be observed that many persons do not bear the internal administration of mercury up to the point that may be necessary to act vigorously upon their lesions. In such cases the method of inunction should be resorted to at once. This is less depressing than the vaporization method, is not at all painful, and in spite of the staining of the skin is less disagreeable than the hypodermic method, and is often brilliant in its results.

It is my custom during the course of the treatment of syphilis to intermit the internal administration of the drug, even if it is well borne by the stomach, and substitute inunctions, always keeping in view the general principles upon which the drug is administered.

In certain malignant forms, where the tissues of the individual seem to be rapidly breaking down as a result of the disease, hypodermic injections of the bichloride may be given with very prompt effect. They should be repeated with care, bearing in mind the fact that death has ensued from this method of using the drug. With ordinary precautions, however, and choosing the buttocks for the site of the injections, there is, in my opinion, but little danger.

Even in cases of malignant syphilis the effect of the injections should be watched very closely, and every possible accessory measure taken to increase the general well-being of the patient.

One of the most important guides to indicate the period during which treatment should be carried on is the condition of the glands throughout the body, particularly the epitrochlear and those which are not usually found enlarged in the more common dyscrasias. So long as these glands remain enlarged, it is one indication at least that treatment should not be discontinued. Enlargement of the glands alone is not positive evidence of syphilis, but if the practitioner has followed his patient from the onset of the disease, and has appreciated that these enlargements have grown smaller or disappeared entirely under treatment, it is confirmatory evidence that they are syphilitic in their nature. If the individual gives a suspicious history and has glandular enlargements, it is well to give him the benefit of the doubt and administer mercury; but, at the end of three months, say, if no material change has taken place in the size of the glands, it may be reasonably concluded that connective tissue changes have occurred in them to such a degree that they are now permanently enlarged.

The duration of the treatment, irrespective of the state of the glandular system, will depend somewhat upon the individual and the continued activity of his

disease. But experience teaches that long-continued and gentle treatment for *at least* three years (some authorities say five, and one has lately urged seven) affords the patient protection from the effects of the disease later in life.

A FURTHER REPORT ON THE USE OF "ANTIPHTHISIC SERUM, T. R." (FISCH), IN TUBERCULOSIS.

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(Concluded from page 445.)

SUMMARY OF CASES.

Class I.

Case.	Duration of treatment.	Since close of treatment.	Results.	Resident of Colorado.
1	3 months.	9 months.	Cured. No relapse.	3 years.
2	3 months.	10 months.	Cured. No relapse.	19 years.
3	1 month.	14 months.	Greatly improved.	6 months.
4*	2 months.	9 months.	Renewed treatment. Improving.	2 years.
5	2 months.	10 months.	Cured. No relapse.	4 months.
6	3 months.	11 months.	Good. No relapse.	6 months.
7	1 month.	10 months.	Good. No relapse.	3 months.
8†	3½ months.	6 months.	Cured. No relapse.	1½ months.
9	1 month.	13 months.	Improved. No relapse.	(?)
10	2 months.	Treatment continued.	Improving.	11 years.
11	4 months.	.....	Good. Improved.	6 months.
12‡	2 months.	Treatment continued.	Improving.	6 years.

Class II.

1‡	8 months.	5 months.	Cured. No relapse.	1 day.
2‡	2 months.	13 months.	Cured. No relapse.	2 months.
3	4 months.	8 months.	Improved. No relapse.	1 month.
4	2 months.	11 months.	Improved. No relapse.	3 years.
5	2½ months.	2 months.	Distinct improvement.	2 months.
6	5 months.	Continued.	Improving.	2½ years.
7	3 months.	Continued.	Improving.	3 months.

Class III.

1	8 months.	6 months.	Cured. No relapse.	2 years.
2	8 months.	7 months.	Improved. No relapse.	4 years.
3	2½ months.	Continued.	Improving.	6 months.
4	6 months.	Continued.	Marked improvement.	1 day.

Class IV.

1	2 months.	5½ months.	Became worse. Final results unknown.	2 months.
2	2 months.	1 month.	Died.	1 month.
3	1 month.	1 year.	Became worse. Final results unknown.	3 months.
4	1 month.	.....	Died.	3½ years.
5	3 months.	8 months.	Improved. No relapse.	6 months.
6	2 months.	8 months.	Improved slightly.	8 months.
7	5 months.	1½ month.	Improved slightly. No relapse.	3 months.
8	5 months.	6 months.	Improved. Relapsed and rapidly failed.	2½ years.

* Relapsed at end of nine months.

† Reacted to "O. T." test before beginning serum.

‡ Tuberculin test at close of treatment. No reaction.

The ultimate summary is as follows:

CLASS I.—Twelve cases; ten patients discharged; nine have remained well to date, and one case relapsed at end of nine months; renewed treatment and patient is rapidly improving. Two patients not yet discharged, but are improving.

CLASS II.—Seven cases; five patients discharged; two cured and three greatly improved. Two continue the treatment and are improving.

CLASS III.—Four cases; two patients discharged; one cured and one greatly improved. Two patients continue the treatment and are improving.

CLASS IV.—Eight cases; two deaths; two patients became worse under the treatment, were discharged, and returned to their homes—results unknown. Three improved and have had no relapse. One improved and relapsed.

A study of the foregoing case has given me a broader conception of serum therapy in tuberculosis, and in conclusion I wish briefly to note a few of the points which have appealed to me with greatest force. I wish it understood, however, that I do not profess to be dogmatic in my deductions. My cases I report simply to bring them to the notice of other observers, with the hope that we may be of mutual help in our efforts to understand the nature of tuberculosis and antitoxine therapy.

In a study of tuberculosis we should always keep in mind these factors: (a) The degree of impaired resisting power of the patient; (b) the degree of virulence of the infecting germs; and (c) the relation which these two factors bear to each other.

(a) It is an undisputed fact that certain species of animals possess little or no susceptibility to tubercle bacilli, while others are susceptible to a high degree. These differences demand an explanation.

Recent investigations in this direction have led us to believe that *predisposition* on the one hand and *immunity* on the other are conditions of the organism resulting from a poverty or abundance of certain specific antitoxines, and, furthermore, these antitoxines are supposed to have their source in the leucocytes and tissue cells of the organism under consideration.

After a prolonged study of cells in tuberculous blood it is with no hesitancy that I repeat the statement which I have formerly made, that the physiological chemistry and the morphology of such cells reveal certain deviations from normal characteristics. These changes I have interpreted as signifying an impoverished state of the cells, and, as a natural accompaniment, an impaired functional activity of such cells. Therefore, if we accept as a fact the hypothesis that cells are antitoxine producers, it follows that if they are poorly nourished and overworked this function, with others, must suffer. Hence, we can understand why the tuberculous patient is not able to produce a sufficient antitoxine supply.

I, therefore, accept as fundamental principles that tuberculous persons are deficient in tuberculous antitoxines. Furthermore, that this deficiency in antitoxines results from a diminished antitoxine generating power of the leucocytes and tissue cells of the patient. Hence, it would seem that if the patient is reinforced by the daily administration of antitoxines prepared by an animal possessing a higher degree of immunization, the overworked leucocytes and tissue cells of the patient

will be relieved from excessive labor and will have an opportunity to recuperate. With needed rest, recuperation follows. Cell functions are strengthened, and hence the unaffected tissues are better able to protect themselves against a further invasion of the bacilli.

A successful therapy must aim first toward preventing a further extension of the disease. This of necessity must come by increasing the resisting power of the tissues not yet affected. If the administration of antitoxines has the effect of reinforcing the unaffected parts of the body and protecting them against a further extension of the infection, our first object in therapy is accomplished. Our next duty is to inquire into the lesions already existing, and especially as to the destiny of the germs in these lesions.

From the nature of the conditions there are four possible destinies for the germs: (a) They may make their escape through the blood or lymph channels to other parts of the body and establish new foci of infection. (b) They may succumb to phagocytes while attempting to establish new foci. (c) They may become encysted and remain in a latent state within the body. (d) Or they may make their escape from the body in the sputum or other excreta.

One of the preconceived ideas which has been extensively held concerning the use of serum in tuberculosis is the one bearing upon the time required to bring about results. So far as I have been able to learn, we have expected results too soon. Perhaps the most valuable point which I have learned from these observations is the fallacy of rapid cures from serum therapy in tuberculosis.

I have found it one of the most difficult things to bring about a complete disappearance of bacilli in well-established cases. My experience has convinced me, however, that actual cures in such cases can be effected even when bacilli are abundant, but a much longer time is necessary to accomplish these results than is generally supposed. I deem it important, therefore, to devote a portion of this report to the discussion on this point.

In order to obtain a correct understanding of the effect produced by serum in tuberculosis, it is first essential to form a correct conception of the nature of the pathological condition with which we have to deal. It is frequently the case that we centre our thoughts upon one part of a subject, while others, equally as important, are overlooked. In the study of serum therapy in tuberculosis I believe the error has been made of devoting our attention too exclusively to the nature of the toxins and antitoxines, while the nature of the disease—the pathology of the tubercle—has been to a great degree overlooked.

Tubercles are neoplasms. They are not only delicate of blood vessels, but they force their way into its anastomoses and tend to occlude the vessels already existing near them. Hence, they tend to shut off their own

blood supply and nutrition. These conditions are primarily the cause of the disintegration which necessarily follows. Furthermore, the conditions which shut off the blood supply to the tubercle also shut off the antitoxine supply. Hence, the very nature of the tubercle will explain why the part in greatest need of antitoxine must be the last to receive its benefit. Hence, the isolated nature of tubercles and the fortification of bacilli within them to a great degree explain why a much longer time is necessary to bring about results from antitoxine treatment in tuberculosis than in diseases in which such conditions do not exist.

(b) On the other hand, able experimenters have demonstrated that the virulence of the germ is by no means uniform or constant; and, furthermore, that the virulence of the germ is measured by the potency of its toxins. The question then arises, What conditions govern this potency? Does the potency of the toxine depend upon a strong germ, does it depend upon a fertile soil, or does it depend upon both?

I believe the same biological law holds good with germs as with cells; if they are poorly nourished their metabolic power will be less potent. We know that media congenial to the animal cell are uncongenial to bacilli, and inversely. In other words, bacilli thrive best in feeble or pathologic tissues, while normal tissues are more or less uncongenial media. Hence we infer that bacilli necessarily find it more difficult to propagate and colonize in uncongenial media. Therefore, I believe we may safely conclude that as the tissues of the patient approach the normal state, the conditions become less congenial for bacilli, and hence their toxins become less potent and the bacilli less virulent. This hypothesis will account for the fact that bacilli are often found in the tissues of persons apparently in perfect health without producing tuberculosis.

(c) This state has been designated as latency of the germs; but it appears to me that the foregoing explanation is more plausible—that as the culture media become less congenial the toxins are rendered less potent, and as the toxins become less potent the bacilli become less virulent. Therefore, when bacilli are surrounded by the conditions existing within certain animals or within certain persons, such germs, for the time being, really become nonpathogenic.

On the other hand, we must remember that the toxicity of the tubercle bacillus is not its greatest source of danger. It differs from the Klebs-Loeffler bacillus of diphtheria in this respect. The latter possesses a very potent toxine, in which lies its greatest danger. Tubercle bacilli irritate tissue cells and cause rapid cell proliferation, which ultimately forms the tubercle. These neoplasms interfere with the blood supply and nutrition of the adjacent parts. The result is cell and tissue disintegration. But we must also remember that the irritation produced by bacilli is maintained as long as the conditions remain favorable to their growth. Hence,

the first step toward overcoming this condition must be toward increasing the resisting power of the unaffected tissues, and thereby rendering them uncongenial to the germs. By preventing a further extension of the disease we shut off the greatest source of danger.

When tubercles exist bacilli possess strongholds that are very difficult to attack. The tubercle already existing must necessarily, sooner or later, undergo disintegration. Our method of attack must therefore resemble that of a siege. If we render the unaffected parts of the body sufficiently uncongenial so that bacilli are unable to establish new foci, and if the supply of nutrition is shut off from the tubercle and the nutrition within the tubercle itself is utilized, the propagation and colonization of bacilli must cease. The bacilli must therefore either become encapsulated and remain within the body, or pass from the body with the disintegrating parts of the tubercle and the adjacent tissues which have suffered in common with the tubercle itself, or establish themselves in some other part of the body.

Let us now attempt to apply these interpretations to the foregoing cases as affected by the serum treatment. I have observed that all the body functions of patients have distinctly increased under the administration of the serum—the appetite, digestion, sleep, weight, and strength. Also, as the improvement advances, the percentage of young cells of the blood increases. These phenomena are evidently significant of an increased cell activity and constructive metabolism. On the other hand, as these conditions have been observed, I have also observed another set of phenomena. The expectoration in well-established cases increased in quantity, the cough became looser and easier, and the bacilli in the sputum became more numerous. Also, the area of infiltration and consolidation diminished, and the breathing capacity correspondingly increased. I have also observed that as the first set of phenomena increased, the second set increased up to a certain point and then rapidly ceased. I refer particularly to Case I of Class II, and Case I of Class III.

In the majority of the cases in the foregoing report the serum was not continued sufficiently long to bring about a cure. But in these cases good effects were obtained and have been maintained, although a cure was not produced.

Reactions and Physiological Effects.—As is the case with many of the remedies used in the therapy of tuberculosis, the serum does not impair the appetite and digestion. During the course of treatment it produces a depressing effect. The majority of patients begin to experience this about the close of the first week of treatment. The same results may also be experienced at any time during the treatment when the dose has been close to the maximum during several consecutive days. When this effect is produced the dose should be lessened for a short time, and then again slowly increased. If the

serum is administered during the afternoon or evening the slow reaction which occurs a few hours later is experienced at night when the patient is asleep.

Patients undergoing treatment should exercise as little as possible. Rest, lung gymnastics, sleep, and forced nutrition are excellent adjuncts to the serum. I am inclined to believe that a medium dose administered daily over a long period will give better results than if the dose is pushed too rapidly. I have observed that large doses of serum, continued for considerable time in cases with advanced tuberculosis, raise the temperature.

Frequently more or less infiltration is produced about the seat of the injections, but this rarely reaches actual inflammation.

In four cases I have observed distinct evidence of an increased functional activity of the skin. In these cases a distinct morbid condition of the skin had existed years previously. These were generally forms of severe acne. Improvement commenced soon after beginning the serum, and the eruptions finally disappeared.

Instantaneous reactions are occasionally experienced, and are generally the result of a prolonged series of injections in the same area. When they occur, it is generally in persons with tightly contracted skins or in whom there is a deficiency of subcutaneous cellular tissue. The resistance to the injected serum in such persons is greater, and frequently causes much infiltration or induration of the injected area. When the serum is injected in such places, the tissues being non-elastic, the capillaries are readily ruptured and the serum quickly enters the circulation. This evidently is the most important, and often causes more alarm than any other phenomenon in the administration of the serum. A study of these reactions has convinced me that they are not an indication for alarm or for a reduction in the dose, but rather indicate the selection of a new site for administering the serum.

In conclusion, I wish to record the following observations: (1) In incipient cases, or in cases with small areas of infection, the serum treatment gives the best results. (2) Patients with well-established tuberculous lesions require longer time to bring about a cure than has heretofore been considered necessary. (3) A serious mistake is made in dispensing with the use of the serum too soon in any case that improves under its use. I therefore make it a rule to continue the treatment two or three months after all bacilli and other symptoms of the disease have disappeared. (4) I have observed that all patients who have done well under the serum have continued to improve after discontinuing the treatment. This fact would indicate that the effect of the serum is permanent; that it does not simply act while it is being used, but increases the antitoxine-generating power of leucocytes and tissue cells of the patient to such a degree that the artificial supply can be dispensed

with. (5) The number of bacilli in the sputum, when other signs of the disease are diminishing, is by no means a true criterion of the condition of the patient. This has been well shown in each well-established case in which I have observed improvement under the serum treatment. I have observed in a number of cases, just before the complete disappearance of the bacilli, that the sputum was almost a pure culture, the stained film showing bacilli in enormous numbers, frequently in large masses too numerous to count. (6) I have continued the serum in daily doses as long as nine months in individual cases with no deleterious effects. (7) The longer I use the serum the more I am impressed with the necessity of a proper selection of cases. The results obtained from the serum offer no grounds for believing that all tuberculous patients can be cured, or even benefited by it. Yet, notwithstanding the warnings that have been given on this point, reports have been published in which cases of the worst type only were studied—cases of long standing, in last stages, with mixed infection; and, to make such a report even less valuable, the duration of treatment, as shown by the report, ranged from a few days to two months and a half. Unfavorable results naturally followed, and by the same reasoning the treatment was condemned.

Such criticisms have been made against this method of treatment, and indirect reference made to my former report. I refer particularly to Dr. Waxham's paper, *Journal of the American Medical Association*, March 19, 1898, and April 9, 1898. My delay in replying to Dr. Waxham's criticisms has been for the purpose of accumulating more data and gaining a more extended experience. I now feel that I can speak with some degree of confidence, and refer to the foregoing cases as my reply.

I am convinced, after making the foregoing observations, that a failure to obtain satisfactory results in advanced cases does not reflect upon the treatment, but emphasizes the importance of a proper selection of cases and the necessity of beginning treatment early. (8) I wish also to protest against the exaggerated statements so often made for *climate* alone as a therapeutic agent in tuberculosis. Such statements have created a false impression in the minds of physicians living at some distance from Colorado, and especially is this true when they emanate from men who have attained prominence in this field of work.

It is a well-recognized fact, especially in Colorado, that the great majority of tuberculous patients sent to us from other parts of the country come with the understanding that *climate* alone will give the beneficial results desired. I have given particular attention to this point in the study of the foregoing cases. It is true that many of the patients improve, but if they are carefully followed it will be observed that in a large percentage the improvement is temporary or incomplete,

and that sooner or later a relapse occurs. Hence, many of these patients, in a short time recognizing this truth, realize that they require more than *climate*. They feel the need of counsel, and, naturally turning to an expert on "*climate*," in a short time find themselves under his care. As the disease insidiously makes progress, the patient receives the final information that *climate* was sought too late, and is ordered to his former home. In this manner many physicians at a distance have already learned that the statements regarding *climate* alone proving beneficial in tuberculosis have been misleading.

I would not be understood as opposing properly selected climates in the treatment of tuberculosis. I maintain, however, that erroneous impressions have been given to those who have had no opportunity to investigate this question for themselves. Any well-informed physician, and even the well-informed laity will recognize as self-evident that more than *climate* is necessary to bring about successful results in these cases. Proper tissue nutrition and aids to cell metabolism are essential points which can not be neglected in the successful treatment of tuberculosis.

It has been my experience that there are few diseases which require more careful, conscientious, and earnest advice than tuberculosis, even when the patients have the advantage of living in the Colorado climate. The climate in many cases, aided by a rest from cares and former labors, often checks the active processes of the disease and causes it to remain in a quiescent state. In many cases, however, this latent state is misinterpreted as a cure, and not until the patients return to their former homes do they realize their error, when the disease shows evidence of renewed activity.

Very few patients will persistently follow any treatment daily during a period of six or nine months, unless they believe it their last resort. Even then it requires not a little confidence on the part of the patients, both in the treatment and the physician administering it; otherwise, periods of despondency will come, with a strong tendency to abandon the treatment.

We are all inclined to be dissatisfied with slow progress. But in a disease so unyielding as tuberculosis any treatment that offers the hopes that seem to be presented by serum therapy is worthy our most serious consideration. I have, however, found from experience that patients will become reconciled to their condition in a short time after they are informed of their actual condition, and will cooperate with the physician who is thus candid with them to a greater degree than if left in doubt as to the nature and extent of their disease.

In presenting this report I have endeavored to give the unfavorable as well as the favorable points observed—the disappointments as well as the hopes inspired. After sixteen months of constant study of the effects of the "*antiphthasic serum, T. R.*" I am impressed with

the belief that serum therapy is the coming therapy for tuberculosis.

NOTE.—Three months having passed since completing the foregoing report, I have thought it advisable to give a brief statement of the condition of the patients up to date (April 1, 1899).

Class I.—No relapse has occurred in any member belonging to this class since January 1, 1899. Of the three patients who were taking the serum on January 1, 1899 (Cases 4, 10, and 12), two are continuing the treatment, and are making distinct progress (Cases 4 and 12). One patient (Case 10) has been discharged. Two "O. T." tests were used, 1 mg. and 5 mg. respectively, with no reaction. It should be remembered that this patient reacted distinctly to 1 mg. previous to commencing the use of the serum.

Class II.—There has been no relapse. In Cases 1 and 2 both the patients continue well. In Case 3 the patient has not resumed treatment. The disease remains apparently stationary. There has been no relapse.

Case 4. I have had no communication from this patient since completing the report. **Case 5.** The patient has continued to improve. He weighs more than ever before, but bacilli continue. He has been in New Orleans until recently; has wished to continue the use of serum, but has been unable to find a physician who would administer it. He has recently gone to Texas, and has now resumed the use of the serum and expects to continue its employment until the bacilli disappear.

Cases 6 and 7. Both patients continue the use of the serum, with distinct improvement.

Class III.—Three patients in this class have suffered severely from the gripe (Cases 1, 3, and 4); two of them are rapidly convalescing (Cases 1 and 4); one is convalescing very slowly (Case 3). No deaths.

Class IV.—As has been shown by the report, none of the patients in this class were under treatment January 1st; the majority having failed to improve beyond a certain point, the use of the serum was discontinued and they returned to their homes. It is important to note, however, that, so far as I have been able to ascertain, there have been no deaths in this class since the report was completed.

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THORACOPLASTY FOR SARCOMA OF THE CHEST WALL.

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THE case I wish to report was operated upon by me in 1895, and, though I am not usually in favor of reporting old cases, I think this one demands such a report. Operative procedures for malignant disease with an immediate happy result are frequently reported, but we find that a small percentage of these have a permanent freedom from recurrence. Tumors involving primarily the soft parts of the thoracic wall, such as subfascial lipomata, submuscular fibromata, angiomiata, or lymphangiomiata, with prolongations between and beneath the ribs in the subpleural space, are in the first place rare and, secondly, do not usually require more than a simple resection of the rib or ribs for their complete removal. With tumors of the bony framework, however, the condition is quite a different one, and we must be prepared at all times to enter the pleural cavity in order to secure a successful result. I refer here particularly to the enchondromata and sarcomata. Enchondromata in this region are not common, since in

two hundred and thirty-seven cases Weber found only seven, while Gürtl found only three cases, and Schläpfer in the whole literature of the subject found only twenty-eight cases involving the ribs. A precise and reliable collection of the enchondromata is a difficult task, owing to the mixed forms of tumor formation which occur in this region and in which cartilage is present as a purely transitional tissue with other varieties of growth, as well as to the varied applications given to the same growth by different pathologists. The enchondromata, occurring usually as single tumors and in the immediate neighborhood of the cartilage of the rib, exhibit a slow, continuous growth in size and, according to their location, a greater or lesser amount of disturbance from pressure or weight. Severe symptoms are exceptionally present, even though the growth into the subpleural space causes an irritative pleuritis or compression of the lung. Fortunately, in the cases so far reported the pleuritis has not been attended with an extensive fluid exudate, nor has the compression of the lung been such as to render it impossible for the lung to accommodate itself to the pressure. In a very few cases the growth of the tumor has ceased after several years (twenty-five to thirty) of increase. It is the rule, however, to observe a slow but steady increase in size, which after years shows a distinct malignancy in its rapidity of growth and metastases. Primary sarcoma of the tissues over the ribs and periosteum is rare, although such cases are reported by Waitz, Billroth, Küsler, Lievier, and Falkson. It is not rare, however, for a primary sarcoma to take its origin in the bony framework, either of the sternum or the ribs, in the form of a periosteal or endosteal growth.

Pulmonary involvement as a general rule takes place late in the course of the tumor's existence, and in many cases this fails to be present at all. Nor does the process advance so rapidly that the lung can not accommodate itself for a time at least to the infiltration or the pressure of the tumor alone, or to the pressure of the pleuritic exudate (sarcomatous pleuritis). Sarcomata occur more frequently in the sternum, while the enchondromata seem to have a greater predilection for the ribs.

Sarcomata and enchondromata have been removed by thoracoplastic operations, together with a larger or smaller portion of the costal and diaphragmatic pleura, in seventeen instances (Paget, 1897). Of the seventeen, four died of or after the operation; one recovered from the operation, but died quickly of recurrences; twelve made a complete recovery. The mortality from the operation was therefore 23.5 per cent. Slow recovery and death from recurrence and septic infection, 5.9 per cent. Complete recovery from operation, 70.6 per cent. Those cases in which the pleural cavity was not opened were (Paget) six in number. Of these, two died. The mortality was therefore 33⅓ per cent. Recoveries, 66⅔ per cent.

Schläpfer's statistics include sixteen cases of en-

chondromata which were removed. Eight cases resulted fatally. Two of these died of metastases in the lungs, two of pneumothorax, two of local recurrences, one of morasmus, and one of pleuritis (?). Schläpfer also collected twelve cases in which no operation was performed. Of these patients, eleven died. Gerulanos has collected thirty-eight cases of tumors of the thoracic wall in which thoracoplasty has been done. In these thirty-eight cases, thirteen of the patients died—three of collapse within eight to twenty-four hours after operation; two with no statement of time or cause; one with no statement of cause on the fifth day; one of empyema with perforation of the lung at three months; one of carbolic poisoning at three months; one of oedema of the lungs, hæmorrhages into the pleura and pericardium, at the end of the second day; one of capillary bronchitis without infection of the pleural cavity, time not stated; one of metastases in the right lung with a large serous and bloody exudate upon the left side, operation upon the right side; died on sixth day; one of tuberculosis pulmonum on the fifth day; one of pneumothorax on the second day—mortality is 34.21 per cent. Of these thirteen cases, we find three with no statement of the cause of death. Of the ten remaining patients, three died of collapse, one died of carbolic-acid poisoning, one died of pneumothorax, and the remaining of complications on the part of the lungs. We have therefore four cases as the direct result of the operation (11.4 per cent.), and if the three cases of which nothing is known as to the cause of death are here included, 18.4 per cent. Adhesions to the thoracic wall and diaphragm, together with extensive involvement of the lung itself, may be present without giving symptoms or physical signs denoting their presence, and the surgeon must be prepared in any case to open the pleural cavity to remove a larger or smaller portion of the thoracic wall and to deal with hæmorrhage from the thoracic wall and lungs (case of Gerulanos, *Deutsche Zeitschrift für Chirurgie*, 1898, Bd. xlix).

The mortality of this procedure has been largely due to operations performed upon cases in which the diagnosis of the interpulmonary condition has not been accurately made out. The enchondromata demand as early a removal as the sarcomata, and delay in a sufficiently thorough removal at the outset allows only a greater chance for a recurrence.

In the smaller tumors of this class a complete and thorough extirpation can often be accomplished with a resection of the ribs alone. In the larger and more rapidly growing tumors one must add to this resection of the ribs the danger resulting from a pneumothorax, an infection of the pleural cavity, and hæmorrhage from the lungs when they are involved.

Operators are in the main agreed that the incisions exposing the tumor should fashion a flap which will cover its site. A resection of the ribs should follow the exposure of the tumor. They should be divided at

some distance from the growth, and after ligation of the intercostal arteries the tumor, together with the ribs, should be raised and a separation of the costal pleura from them be accomplished. When this is not feasible, owing to involvement of this membrane, the pleural cavity is opened and as much of the membrane as is necessary is removed. After removal of the tumor and ribs, the borders of the wound are to be accurately sutured, for the more precise and exact this suturing of the borders of the pleura and thorax, the more quickly disappears the pneumothorax. An exact arrest of all hæmorrhage before the pleural cavity is opened and before the final suturing is accomplished is all-important.

In the abdomen we have to combat principally infection, whereas in the thorax we have in addition mechanical conditions to avoid which are scarcely as yet overcome with certainty. Though a traumatic pneumothorax is relatively well borne, and large blood extravasations in the pleural cavity are absorbed, patients have not infrequently succumbed to the first attack of shock or compression of the lung, becoming dyspnoic and dying of asphyxia.

The smaller the opening in the pleura—i. e., the smaller in proportion to the diameter of the bronchus—the more the lung is able to maintain its function. The larger this opening, the more rapidly its collapse in proportion to its elasticity. By each inspiration a diminished volume of air space is left. The mediastinum is pushed to the healthy side, and hence an increased blood pressure. The surface of the lung is cooled and the terminal filaments of the vagus are irritated.

This sudden change in the conditions within the thorax will cause a severe alteration in the action of the heart and lungs:

1. An increased frequency in respiration, with the lung upon the operated side in a state of collapse.

2. Owing to pushing of the mediastinum toward the non-operated side and the depression of the diaphragm (the result of atmospheric pressure), the lung upon the uninjured side is compromised in its inspiratory effort, and the heart and greater vessels within the mediastinum may completely stop action. This is induced partly by direct action and partly by reflex action through the vagus.

3. When the opening in the thorax is of sufficient size and is left open a long time owing to the same causes, an increased frequency in heart action and in respiration takes place which may go on to cessation of action. With closure of the opening in the thoracic wall the air is absorbed and the symptoms are relieved slightly immediately after operation, in greater degree in thirty hours, and in some cases the air has been completely absorbed in three days. Then, we should allow the air to enter the pleural cavity slowly, and should finish all work that can be done before opening the cavity, so that as much time as possible may be saved in ex-

posing the lung and mediastinum to the atmospheric pressure.

Care must also be taken to prevent the cooling of the surface of the lung by warm and moist compresses.

When the tissues over the tumor are involved so that they can not be retained for a flap, it is thought best to cover the space with sterilized rubber tissue, securely fastened to the margin of the wound. It should remain until the lung expands and becomes adherent to the margin of the space left in the thoracic wall. Or we may make use of the occlusive dressing, and secure drainage by an opening which is relatively smaller than the diameter of the bronchus—i. e., by gauze packing, occlusive dressing, and tube, which remain in place until adhesion occurs to the margin of the space excised. Where this is done, the lung will expand often within three to seven days.

It should also be remembered that a difference exists in the danger of the operation as to whether the right or left side is the site of procedure, since the increased danger in operating upon the right thorax depends upon the air pressure upon the right auricle and vena cava interfering thus with the proper aspiration of venous blood. While we can remove portions of the thoracic wall without great danger and allow the production of a traumatic pneumothorax, the surgery of the lung has not advanced *pari passu*. Tumors of the thoracic wall may, however, extend to the lung and demand partial or complete extirpation of one or more lobes. Weinlechner was the first, in 1880, to operate for this condition, and since then Krönlein, Heinicke, Koenig, Park, Muller, Hilferich, and Gerulanos have each performed the operation. Of these eight patients, four died; two died early of a pleuritis, while two died of exhaustion due to heart failure. The possibility of easily overcoming the hæmorrhage in the lung where a partial resection of a lobe is done is exemplified in these cases. The procedures most in favor seem to be either the tamponade with gauze or the ligature *en masse* (*Umschlingsnaht*) in cases of a partial resection, while in the complete extirpation of a lobe both Hilferich and Gerulanos arrested the hæmorrhage perfectly by the use of a clamp and catgut ligatures applied at the hilus of the lung. The blood pressure in the pulmonary arteries being one third less than in the general circulation, the application of ligatures to the arteries may be made as easily as to veins. With the dangers of hæmorrhage and sepsis reduced to a minimum, we have left the severity of the operation itself as the main point to combat.

CASE.—M. B., aged ten years and a half, born in New York State, was admitted to the hospital on September 5, 1895.

On June 10, 1894, the patient had been operated upon for a fibrosarcoma of the chest wall, at which time the tumor was removed without a resection of the ribs to which it was probably attached. A reappearance of the growth took place within six weeks from the time of the operation.

At the present time (three months from the time of operation) the neoplasm is situated just below the axilla of the left side and over the fourth, fifth, and sixth ribs and the intercostal spaces. It is quite painful and is closely attached to the ribs over which it lies. There is no history of pulmonary complications. The mass has been noticed by the patient for about six weeks. Physical examination shows the tumor to be hard and evenly outlined. It measures three and a half by four inches. It is situated between the anterior and posterior axillary lines and occupies the space over the fourth, fifth, and sixth ribs and their intercostal spaces. It is immovably attached to the ribs mentioned. The skin over the tumor is freely movable and is uninvolved by the growth. An examination of the chest and of the abdomen was negative. The urinary examination was also negative. The temperature and pulse were normal.

Operation, September 27, 1895.

Ether. An incision (tongue-shaped) beginning at the lower border of the second rib in the posterior axillary line was carried downward to the lower border of the seventh rib, thence forward along this rib until the anterior axillary line was reached, whence it ascended to the lower border of the second rib. This flap, which exposed the space over the third, fourth, fifth, sixth, and seventh ribs, was dissected from the underlying tissue. A circular portion of the chest wall was removed, including the growth and about an inch of healthy tissue beyond its edge, after separating the periosteum of the fourth, fifth, sixth, and seventh ribs and securing the intercostal arteries at the point at which they were to be divided. After the division of the ribs the attempt to separate them from the costal pleura revealed an intimate union of the pleura to the growth over a space of two inches and a half by three inches.

The pleura was then incised in a line with the division of the ribs and was removed, together with the ribs and the tumor. The air was allowed to enter slowly into the pleural cavity. The lung collapsed, except for such air as entered it from the right lung. The pulse maintained its usual rate, and no cyanosis nor shock was observed. All hæmorrhage having been stopped, the flap, consisting of muscle, subcutaneous tissue, and skin, was replaced and was carefully sutured to the margin of the opening into the pleural cavity with catgut for the deep sutures and silk for the superficial sutures. The edges of the incision were accurately apposed, except for an inch at the lower margin, where a sterile gauze packing protruded through the opening left beneath the flap. A sterile dressing and a binder were then applied.

September 30th.—Dressing changed. It is soaked with a clear fluid slightly tinged with blood. Temperature, 104° F.; pulse, 110.

October 1st.—Temperature and pulse normal. Wound closing nicely.

October 3d.—Temperature and pulse normal.

October 5th.—Stitches removed. Dressing reapplied.

October 7th.—A considerable amount of clear fluid discharged from the wound. Dressing reapplied.

October 7th, 9th, and 16th.—Wound healing. Dressing reapplied. Temperature and pulse normal.

October 30th.—A small sinus only remains. Examination of the chest reveals nothing abnormal except some adhesions beneath the area of operation.

October 31st.—Discharged.

November 10th.—A communication from the patient's physician states that the sinus remaining after leaving the hospital has closed.

Pathologist's Report of the Tumor.—A hard, white, fibrous tumor attached to the periosteum of the fourth, fifth, and sixth ribs. It involves the pleura covering its internal surface. Microscopically it is a somewhat vascular, round and spindle-celled sarcoma.

January 14, 1898.—The patient informs me by letter that she is in good health and free from any return of the tumor.

January 10, 1899.—I am informed by her physician that she is still free from any recurrence; that no lateral curvature in the spine is present; the thorax shows but little deformity in shape, considering the amount removed; and that the lung seems to perform its functions in a perfect manner.

From the examination of this and other cases of thoracoplastic operations for neoplasms involving the chest wall, it is evident that much of our success will depend:

1. Upon an early accurate diagnosis and thorough and complete removal of the growth.

2. Upon the fact that the shock following these operations is usually not severe and can be overcome.

3. Upon the fact that hæmorrhage, when confined to the area supplied by the intercostals and the internal mammary arteries, can be safely and easily avoided, and when the process has extended to the lung, requiring either a partial resection or an extirpation of a lobe, loss of blood has been minimal through the use of the clamp, ligature, and packing.

4. Upon the fact that, though a traumatic pneumothorax has been considered a barrier to these operations, yet in a normal condition of the pulmonary organs, provided air is not admitted to the chest cavity through a valvular orifice, the pressure does not seem to be sufficient to cause any alarm. With a free and more or less extensive opening in the chest wall, the lung collapses during two or three respirations and remains so except for such air as is forced into it from the lung of the opposite side during expiration. This is especially observed during the time in which any obstruction to respiration exists in the upper air-passages.

5. Upon the fact that though the infection of the pleural cavity seems to be the greatest danger, a danger which may involve not only the pleural cavity of the side operated upon but as well of that of the opposite side, yet with care even this complication has been successfully avoided.

6. Upon the time of exposure of the lung to the pressure and the cooling effects of the air, which may in a great measure be curtailed by attention to all hæmorrhage before opening the cavity, and, after opening it, by the use of warm and moist gauze pads.

7. Upon the fact that flaps are fashioned so as to cover the defect in the thorax when possible, otherwise the use of rubber tissue packing and an occlusive dressing.

8. Upon the use of drainage, which seems so far to have been employed in all the successful cases.

A STUDY OF PRESENTATIONS AND POSITIONS OF THE FÆTUS.

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IN 1771, Solayrès, of Paris, wrote his essay, *Dissertatio de partu viribus maternis absoluto*. This essay marks an epoch in the history of obstetric art. In it the author discusses presentations and positions, and classifies them for the first time. Baudeloque, a pupil of Solayrès, closely followed his young master with a classification too complex and confusing to be practical. He was followed by others with classifications aiming at greater simplicity. All obstetricians have been agreed, since the time of Solayrès and Baudeloque, upon the two cardinal positions right and left, and in the main upon the fixed points of reference upon the foetal head.

But the landmarks upon the maternal pelvis were arbitrarily chosen, each authority selecting his own.

The nomenclature employed was wanting in uniformity, was confusing to the beginner, and proved troublesome to the practised student. Since the relation of certain landmarks of the presenting part must, in fact, sustain a fixed and uniform relation to certain landmarks of the pelvic inlet, it is unfortunate that so much confusion existed for so long.

Left occipito-anterior is and has always been left occipito-anterior. It is identical with left occipitotilia, left occipito-acetabular, left occipito-cotyloid, and first oblique. This variance in naming the points of the pelvis extends to all the different vertex, face, breech, and trunk positions. It extends also, to a greater or less degree, to the fixed points of the presenting breech and trunk of the foetus. Again, the relative frequency of the positions caused them to be named by numbers. Comparing a copy of William H. Byford (edition 1873) with one of Playfair (edition 1876), we find the second and third positions of Playfair differ from the second and third of Byford. Each author is, doubtless, correct according to his own observations or his teachings, but the numbering of the positions by individual observers gave rise to confusion, for no two observers will or can arrive at the same conclusions in matters requiring mathematical exactness, and for obvious reasons.

The confusion attending the student beginning the study of obstetrics with Playfair for text book and Byford for didactic teacher, or vice versa, is very apparent. And yet this was the state of teaching enjoyed (?) by many who are still in active practice. Charpentier, Tarnier and Cazeau, and Playfair, of Europe, Dewees, Meigs, and Byford, of America, are authors of ability

and men of broad experience that appeared since 1871, the year that marks the first century milestone from the classification of Solayrès. A study of these authors reveals that efforts to simplify matters up to this time had met with poor success. Each one differs from the other. Since 1864, when abdominal palpation came into general use as the best method of diagnosis, the tendency has been to make classification and nomenclature more simple. But, in the absence of a fixed standard, individual effort contributed to the continuance of the confusion rather than to its removal. It was very apparent to the best teachers that a uniform nomenclature in obstetrics could be obtained only by a concerted effort, based upon a nomenclature generally agreed upon.

As the time seemed ripe for action, Dr. Alexander Russell Simpson, of Edinburgh University, brought the subject before the Seventh International Congress, held in London. At this meeting a committee, international in *personnel*, was appointed, to draw up a scheme for a common obstetric nomenclature.

Each member of the committee was to consult with a committee of his countrymen. At the next meeting, held in Copenhagen, "a scheme for recommendation" was adopted. This scheme was sent to all the leading obstetricians of the different civilized countries. Criticisms and suggestions were invited in order to secure a full representation upon which the committee might base its report. For presentations and positions we find the following: "The positions of the fetus are best named, topographically, according as the denominator looks—first, to the right or left, and second, anterior and posterior. The Latin words should be used, and when initial letters are employed it is advisable to use the initials of the Latin words" (1).

At the next and ninth International Medical Congress, held at Washington, D. C., 1887, Dr. Simpson made an analytical report, drawn up from replies received to the recommended scheme. The report was received, and the committee (2) instructed to formulate a classification and nomenclature to be presented at this same meeting. The formulated scheme was drawn up accordingly, and presented to the Section on Gynecology and Obstetrics. After considerable discussion, none of which was very unfavorable, the report was adopted. It was chiefly due to the energy and persistence of Dr. Simpson that the measure was carried, a measure that has rendered the teacher and student of to-day a signal service.

I here transcribe the classification of positions as adopted at this meeting:

Left occipito-anterior = occipito-lavo-anterior = O. L. A.

Left occipito-posterior = occipito-lavo-posterior = O. L. P.

Right occipito-posterior = occipito-dextro-posterior = O. D. P.

Right occipito-anterior = occipito-dextro-anterior = O. D. A.

Sacro can be substituted for occipito, and S. for O. for breech presentations; for shoulder presentations, scapulo can be substituted for occipito, and Sc. for O.; for face and brow, "mento" can be substituted for occipito, and M. for O., and the table is complete. Presentations are not named, being understood by implication. This formula is adopted by the *American Text-book of Obstetrics*, as becomes an American book, and is otherwise in general use. The variations now consist in the order of the initials and in the use of the English instead of the Latin for right, R. displacing D. in the initials. For the practitioner who is familiar with his subject, the abbreviations and the words they represent are sufficient. But for the student, to whom we teach presentation and position by means of abdominal palpation, the formula requires the addition of the implied presentations.

For my own classes I have found the method or scheme employed in the German schools useful, and present it as follows: There are but twolies (3): left or first, right or second. Left and right refer to the sides of the mother, and the lie of the fetus is determined by the side of the mother toward which the fetal back looks, or in which it lies, for vertical or longitudinal lies (presentations), and the fetal head fixes the cross lie (transverse presentation).

If the head is in the mother's left iliac fossa or flank and the breech in the opposite iliac fossa, it is a left or first cross lie, etc. In the vertical lie one or the other pole of the fetus must present at the pelvic inlet, while in cross lie some portion of the trunk must present.

The position anterior and posterior of the presenting part is determined by the direction of the back of the fetus. If the back looks toward the front of the mother, approaching the median or long axial line of the uterus, the position is anterior; if the back is carried away from the median line of the mother's abdomen and is directed more toward her back, the position is posterior. This plan, when formulated, reads thus:

Left or first lie	{	Vertex	{ Occiput anterior = L. O. A.
			{ Occiput posterior = L. O. P.
	{	Breech	{ Sacrum anterior = L. S. A.
			{ Sacrum posterior = L. S. P.
Right or second lie	{	Vertex	{ Occiput anterior = R. O. A.
			{ Occiput posterior = R. O. P.
	{	Breech	{ Sacrum anterior = R. S. A.
			{ Sacrum posterior = R. S. P.

Left or first cross lie, back anterior or posterior.

Right or second cross lie, back anterior or posterior.

For the varieties of head presentation, as face or brow, mentum can be substituted for occipito and M. for O. In a cross lie (transverse presentation), the part of the trunk presenting, usually the shoulder, can be determined by the side of the mother in which the head lies and the relation of the fetal back to her abdominal wall. The direction of the back and the side of the mother

in which the head lies, when known, the shoulder presenting is readily determined. Practically, it makes but little difference what part of the trunk presents, for the cross lie must be converted by version into a vertical lie before delivery can take place with safety to mother and child. To make the work thus presented clearer to the student mind we divide it into steps.

First Step.—Find the fetal back; distinguish the firm, smooth plane of the back on one side from the uneven surface of the opposite side and in which will be found the movable small parts of the fetus and the space filled with amniotic fluid. In cases of hydramnios only the amniotic-fluid-filled space can be felt unless the fetus moves its limbs forcibly under the palpating hand.

Second Step.—Find the head of the fetus, differentiating it from the opposite pole.

Third Step.—For position of the presenting part, determine the relation of the fetal back to the median line of the mother's abdomen in a vertical lie, and in a cross lie determine the relation of the back of the fetus to the abdominal wall of the mother in the transverse axis of the uterus.

These steps well fixed in the mind of the student, he reads the initials L. O. A., R. O. P., etc., understandingly. To him L. and R. indicate the lie of the fetus; O. and S. indicate the presentation, and A. and P. tell him in which quadrant of the pelvic inlet the fixed point of the presenting part lies, or toward which it is directed.

The varieties that occur in presentation and position must not be overlooked. First: Varieties occurring in the lie of the fetus.

(a) In a vertical lie the long axis of the fetus crosses the long axis of the uterus at an acute angle, and may be named in the diagnosis, left or first head-lie oblique and second or right head-lie oblique. In a breech-lie this obliquity has but little significance, for it usually exists, the breech never engaging until labor begins; indeed, the oblique lie may serve as an aid to a correct diagnosis of breech-lie. But in a head-lie it is significant, for it always indicates some existing disproportion between the fetus and the maternal parts that exerts a more or less important influence upon labor and its prognosis. The cause of the obliquity in the head-lie may rest with the maternal parts, as in cases of hydramnios, (a common cause), a contracted inlet, or a flat pelvis. It may rest with the fetus, that may be too large to enter a normal pelvic inlet; or the fetus may be too small to engage. In multiple pregnancy the anterior fetus may rest in the oblique lie. The natural forces of labor in its early stage may convert an oblique lie into a cross lie. This accident is especially liable to occur in hydramnios, narrow inlet, or in the presence of a pelvic tumor. Some authors call a cross-lie an oblique lie. It is gratifying to find that Dr. Hirst and Dr. Grandin and Dr. Jarmin separate the oblique lie from the cross or transverse lie, and emphasize its importance.

(b) In a cross lie any part of the trunk may present—

back, abdomen, shoulder, scapula, or gridiron. As version must correct the cross lie, the part presenting plays no important part in the mechanism of delivery.

Second: Varieties in the position of the presenting pole of the fetus.

(a) Head-lie: Extension of the chin, producing face or brow presentations; transverse positions of the head—i. e., the long diameter of the head engages in the transverse diameter of the inlet or parietal bone posterior with the plane of the biparietal diameter of the head oblique to the plane of the inlet—Nägele's obliquity. Auvard, of Paris, in a late American edition of his work, treats the transverse position of the head as anomalous, likely to occur in large or flattened pelves. But he includes it in his tabulated formula, in which he still adheres to the old plan of eight positions for the vertex. Other and very recent authors treat the transverse diameters of the head as anomalous, but do not enumerate them with the four cardinal positions now in general use. Clinical experience teaches the later to be more in accordance with the truth and with simplicity.

(b) Varieties of breech-lie: Complete breech-lie, the more favorable and typical; incomplete breech-lie, the more unfavorable and atypical. In the complete breech, the sacrum or nates present, the thighs are flexed upon the trunk, the legs upon the thighs, the feet crossed and presenting with the nates. In the incomplete, sacrum or nates present, but the limbs are extended so as to lie parallel with the abdomen of the child, the feet resting near the chin, or one foot on each side of the neck. When both limbs are thus extended the labor is difficult and tedious, especially in primiparae, and the child's life is placed in jeopardy.

References.

1. *Transactions of the Eighth International Medical Congress.*
2. Dr. W. T. Lusk, Dr. A. R. Simpson, Dr. A. F. A. King, and Dr. Delaskie Miller, president of the section in gynecology and obstetrics.
3. Spiegelberg.

Therapeutical Notes.

A Mixture for Anorexia.—We find the following in the *Progrès médical* for March 4th:

R Tincture of gentian, |
Tincture of columba, |
Tincture of star-anise, } equal parts.
Tincture of nux vomica, |

M. Ten drops to be taken before each meal, in a little water.

Treatment of Brittle Nails. Dr. N. S. Telf (Medical Brief, April), in answer to a correspondent's query, says that for many years he has recommended the use of lemon juice. He recommends the keeping of half a lemon on the washstand and directs that every time the person washes he should put each finger into the

lemon and use as little soap as possible. The lemon, he says, neutralizes the alkali and will restore the nails in a week.

An Ointment for Sciatica.—The *Riforma medica* for February 18th gives the following formula:

℞ Oil of turpentine, } each	5 parts;
Oil of gelsemium, }	
White wax	2 "
Simple ointment	40 "

M. To be applied to the painful part.

A Pill for Dysmenorrhœa, the Menorrhagia of Puberty, and Uterine Atony.—The *Riforma medica* for February 23d gives the following formula:

℞ Iron and ammonium } citrate,	} each ... 1 drachm;
Powdered ergot,	
Extract of kola	a sufficiency.

M. Divide into fifty pills, to be silver-coated. From two to six to be taken daily at the menstrual periods.

An Application for Excessive Sweating of the Hands.—The *Riforma medica* gives this formula:

℞ Boric acid	5 parts;
Borax, }	} each 15 "
Salicylic acid, }	
Glycerin, }	} each 60 "
Dilute alcohol, }	

M. To be rubbed on three times a day.

A Tooth Powder for Children.—Monti's formula is given as follows in the *Dental Review* for March:

℞ Magnesium carbonate	75 grains;
White chalk, }	} each 225 "
Sodium salicylate, }	
Oil of peppermint	6 drops.

M.

A Mouth Wash for Children.—The *Dental Review* for March ascribes the following formula to Monti:

℞ Boric acid	3 parts;
Distilled water	200 "
Tincture of myrrh	2 "

M.

The Treatment of Alveolar Abscess.—Vian is credited in the *Riforma medica* for March 11th with the following formula:

℞ Salol, }	} each 4 parts;
Menthol, }	
Chloroform	3 "
Distilled water	100 "

M. Rinse the mouth with the solution several times a day. Apply the following to the gum of the affected tooth:

℞ Tincture of iodine, }	} each 4 parts;
Tincture of acetonite, }	
Chloroform, }	} each 1 part.
Tincture of benzoin, }	

Lutaud's Pills for Amenorrhœa.—The *Riforma medica* for March 3d gives the formula as follows:

℞ Iron and potassium tartrate	45 grains;
Extract of artemisia, }	} each ... 30 "
Extract of absinthium, }	
Socotrine aloes	15 "
Oil of anise	enough to aromatize.

M. Divide into thirty pills. One to be taken before every meal.

An Application for Pruritus Ani.—We find the following formula in the *Riforma medica* for March 13th:

℞ Sodium hyposulphite	30 parts;
Carbolic acid	5 "
Glycerin	20 "
Distilled water	450 "

M. To be applied on compresses.

An Application for Eczema of the Anus.—Brocq's formula is given as follows in the *Riforma medica* for March 13th:

℞ Rasped camphor	2 parts;
Zinc oxide, }	} each 30 "
Bismuth subnitrate, }	
Powdered tale	40 "

M.

The Treatment of Freckles.—The *Indépendance médicale* for March 15th gives the following as the formula of Hardy's lotion:

℞ Corrosive sublimate	7½ grains;
Zinc sulphate, }	} each 30 "
Lead acetate, }	
Alcohol	a sufficiency;
Distilled water	7,500 grains.

M.

According to the same journal, Leloir advises scrubbing the affected part with green soap and then applying the following solution:

℞ Chrysophanic acid	15 parts;
Chloroform	100 "

M. The part then to be covered with a layer of chloropercha.

An Ointment for Lupus of the Vulva.—The *Riforma medica* for March 3d credits the following formula to Boeck:

℞ Olive oil, }	} each 8 parts;
Rosin, }	
Yellow wax, }	} each 1 part;
Gum ammoniacum, }	
Venice turpentine, }	} each 4 parts.
Pyrogallie acid	

M.

Coffee-flavored Cod-liver Oil.—The *Riforma medica* for March 9th attributes to Patein the following formula:

℞ Cod-liver oil	6,000 grains;
Powdered coffee	300 "
Animal charcoal	150 "

Heat to 140° F. in a covered vessel, allow it to remain for five days from time to time, and strain it.

A Soothing Ointment.—The *Riforma medica* for March 9th attributes the following to Patein:

℞ Benzoated lard	600 grains;
Laudanum	60 "
Chloroform	45 "
Extract of belladonna	30 "
Extract of cicuta	15 "

M.

For external use only.

Gonococcic Rhinitis in an Infant.—H. de Stella (*Belgique médicale*, January 26th; *Indépendance médicale*, March 1st) reports the case of an infant two months old brought to the clinic in consequence of an impediment in nasal respiration existing from birth, and preventing it from taking the breast. Examina-

tion of the pus from the nostrils showed abundant gonococci. The child had previously had purulent ophthalmia, which had only yielded to the most persistent and energetic treatment. There was also otitis media consecutive to the rhinitis. A generalized syphilitic roseola followed. It was found that the father had suffered from syphilis and concurrent gonorrhea and had infected the mother, thus transmitting the diseases to the child.

The treatment of blennorrhagic rhinitis, says the author, is simple. Lermoyez recommends lavage of the nostrils with simple boiled water, and the insufflation into each nostril of a small quantity of the following powder:

℞ Powdered fused silver nitrate. 3 grains;
Talc 150 "

M.

The author has found the following treatment very successful. He paints the nasal fossæ daily with a pledget of absorbent wool saturated in a solution of protargol, one in fifty, or even one in ten, if the infection is virulent. In the intervals he advises the parents to introduce, three times daily, into the child's nostrils the following ointment:

℞ Vaseline 225 grains;
Boric acid 22½ "
Menthol 2½ "

M.

The author finally impresses upon accoucheurs the necessity for as careful prophylactic consideration of the nasal passages in children born of suspected parents as is accorded to the eyes. A thorough disinfection of the nasal fossæ by dropping into them a 1-in-1,000 solution of sublimate, or of protargol 1 in 80, would prevent the development of this terrible evil, which by enforcing mouth breathing fills the lungs with cold air charged with bacteria-laden dust, often eventuating in laryngeal bronchial, and pulmonary affections; and, moreover, by diminishing the bactericidal action of the nasal mucus, lays the system open to secondary infection of all kinds—to say nothing of its essential nature and its extension to the ear.

A Safe and Rapid Method of Removing "Ear Wax."

—The *Western Clinical Recorder* for March says that cerumen may be quickly and effectually softened by filling the meatus with peroxide of hydrogen and allowing it to soak for a few moments, after which it may be easily removed by syringing with warm water.

Cimicifuga in the Treatment of Tinnitus Aurium.

Model and Robin (*Médecine moderne; Therapist*, February 15th) report the successful employment of cimicifuga in cases of tinnitus aurium not dependent on disease of the ear, even when there was a collection of cerumen. The tinnitus usually subsided in the course of three days, but the treatment failed in cases that had lasted for more than two years.

Mercurial Injections in the Treatment of Lupus.

Bernstein (*Münchener medizinische Wochenschrift*, November 15, 1898; *British Medical Journal*, March 11, 1899) has collected the recorded cases of lupus treated with calomel injections. In thirty-seven cases the results were positive, and in ten they were negative. The amount used for each injection was a cubic centimetre of a ten-per-cent. emulsion with olive oil. Six injections were given in eight days.

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DECAYED TEETH AND TUBERCULOUS CERVICAL GLANDS.

MEDICINE is constantly getting more and more indebted to the dentists for researches that are of distinct value in pathology and often have a direct bearing upon the prevention if not the cure of serious disease. The latest instance that has come to our notice is an investigation of the connection between decayed teeth and the occurrence of tuberculous infection of the lymphatic glands of the neck, by Dr. George W. Cook, of Chicago (*Dental Review*, February). Dr. Cook says that the idea that the pulp canals of decaying teeth might be the channels for tuberculous infection of the cervical glands was advanced some years ago by Dr. Stanley P. Black, who was at that time the pathologist of Mercy Hospital. Acting on Dr. Black's suggestion, Dr. Cook has made bacteriological examinations of the mouth with reference to tuberculous infection in two hundred and twenty cases. While he does not say that all tuberculous infection of the lymphatic glands of the neck takes place through decaying teeth, he thinks it very significant that the pulp canals of such teeth often become tuberculous, since, by reason of the close anatomical connection of the lymphatics with the teeth and with the mucous membrane of the mouth, the canals may readily become the portals of infection.

Dr. Cook gives succinct accounts of eleven cases in which tubercle bacilli were found in or about decayed teeth. One of them was that of a girl, seventeen years old, who had been in rather poor health for some time, and whose teeth had been somewhat neglected. The first and second right molars of the lower jaw were badly decayed. Bacteriological examinations were made on several successive days. On the third day a tuberculous focus was found in the second molar. After several more examinations, at intervals of a few days, the teeth were extracted. Five weeks later the girl returned with a small nodule at the lower border of the inferior maxilla. Dr. Cook told her it was probably tuberculous and advised her to consult a physician at once. Her physician adopted local treatment and assured her that the trouble would soon pass away. However, other nodules began to form, and she

consulted another physician, who advised an operation for the removal of the glands. But this advice was not followed, and when last heard from, having left the country, the girl had pulmonary tuberculous disease.

Dr. Cook points out the desirability of more thorough inquiries into the conditions of the saliva that make it a good medium for the development of the micro-organisms that are found in the mouth, for, he says, it has been shown by a number of investigators that normal saliva is destructive to a great many forms of bacteria. We think it can not be doubted that the author has done an important piece of work in this investigation, one that distinctly emphasizes the importance of taking care of the teeth.

BLUE GLASS AS AN AID TO DIAGNOSIS IN SYPHILIS.

THE use of blue glass as a means of pursuing investigation into syphilitic and other eruptions, either before they have come into the limit of unaided vision or after they have passed beyond it, was suggested by Broca so early as 1893. Haan, in a paper in the *Journal des maladies cutanées et syphilitiques* for October, 1898, without, however, referring to Broca's researches, stated that for some years he had been in the habit of using a glass of cobalt blue in the diagnosis of cutaneous diseases.

Jullien, in the *Archives de dermatologie et de syphiligraphie* for January, 1899, pursues the question further. He himself uses an ordinary binocular fitted with lenses of cobalt-blue glass, of differing intensities of color, similar to the lenses found in cases fitted up for ophthalmoscopic examination. It is necessary to avoid too brilliant a light; a diffused light, similar to that from a cloudy sky, being the best. The glass must be placed as near as possible to the eye to escape diffusion of the rays and to protect the eye from all extraneous light. Under such conditions the appearances are resolved into variations in intensity in a monochromatic picture. Of course dirt and erythematous macule due to pressure or accidental irritation must be guarded against.

What is aimed at is the absorption of those rays of harmful light which fatigue the retina without bringing to its notice any essential distinguishing features. These, of course, in the present investigations, are principally the red rays. Now cobalt blue gives a spectrum of bands analogous to those of haemoglobin. It displays a broad band in the least refrangible portion of the red, one in the orange, one broad but weak in the green-yellow portion, and a feeble one in the green. Between

these bands it notably absorbs the rays, places an absolute impediment to the passage of the red rays, and excludes nearly everything but the green and blue rays.

Broca announced by this means the attainment of the following results: 1. The perception of an eruption before it becomes visible to the naked eye. 2. The displaying of traces of a former eruption. 3. The revelation of a latent eruption.

The anticipation of an eruption is a matter of some moment in forming an early diagnosis; while much may be gained as a confirmatory measure by the employment of this method when the eruption is already visible.

As for latent eruptions, with this method such things practically become non-existent. Cases, for instance, such as have been commonly reported of late, in which syphilis appears to have come spontaneously to a clean stop, after the chancre has disappeared, without the intervention of any treatment, only, perhaps, to reappear at the end of some years, present evidence by this method of examination of the presence of the poison in the system. As Broca pointed out, when a spot appears upon the skin, the point where it is situated has been already for some time the seat of some alteration; while, when an eruption disappears, the morbid process is not interrupted as soon as the eye fails to recognize it any longer.

For a considerable but variable period after the disappearance of an exanthem, as is the case with scars, the tegumentary vascular system does not regain its integrity of function; the tunics of the Malpighian arterioles retain from the neoplastic infiltration a more or less durable tendency to distention under the influence of irritating causes—variations of temperature, chills, hot baths, etc. Consequently, alterations must persist which are not visible to the naked eye, and it is these alterations that, according to the author, blue glass will enable us to detect for a long time in the form of a distinct blush. These stigmata persist longest about the axillæ, the scapular prominences, and the ribs, and even on the flanks and about the umbilicus.

Single examinations, however, are not to be trusted. When anticipating an expected eruption, examinations require to be made at frequent intervals; while, when trying to keep track of the disappearance of a morbid process, they should be repeated once a week. By these means, not only is great assistance rendered to the treatment of disease, when seen in its early stage, by showing when it should be pushed and when it may safely be suspended; but, when seen in the later stage, a valuable confirmatory reinforcement is added to the factors forming a suspected diagnosis.

SULPHONAL POISONING.

MUCH has been written concerning both the therapeutic and the toxic properties of sulphonal. Perhaps the latter have rarely if at all been considered more satisfactorily, from the point of view of the practitioner of medicine, than by Dr. G. Lovell Gulland, in the March number of the *Scottish Medical and Surgical Journal*. Dr. Gulland takes as his text a case that came under his own observation, that of a man, thirty-nine years old, given to the excessive use of alcohol, but free from any decided manifestations of impairment of health due to his indulgence. For a period of about six weeks, apparently, he took thirty grains of sulphonal every night, so that he had taken, in all, at least 1,200 grains. Then he became somnolent, with hæmatoporphyrinuria, passed into a state of coma, and died. At the post-mortem there was found, in microscopical sections of the liver, a degeneration of the branches of the portal vein such as the author has not found described before. He suggests that it may have gone so far at some point as to give rise to an opening through which liver cells may have passed into the blood.

Hæmatoporphyrinuria, says Dr. Gulland, is usually assumed to be the cause of death, and hence it is argued that sulphonal is a blood poison in the sense that potassium chlorate and aniline are blood poisons; but, he adds, it appears to have been overlooked that sulphonal may kill without producing hæmatoporphyrinuria, especially in the acute cases. It seems probable to him that the cause of death is uræmia (in the widest sense of the word), but that the symptoms of that condition are masked by the effects of the drug.

Dr. Gulland does not think that sulphonal should be regarded as a dangerous drug, but he pleads for greater caution in its use, and especially for greater discrimination in the choice of cases in which it is to be used. "Its apparent capriciousness of action," he says, "is its chief danger, and a drug which has a recorded death-roll of at least thirty cases, and probably many more unrecorded, is not one which should be recommended with a light heart to the first-comer." Its advantages in causing a restful sleep and in being less disagreeable to the taste and less expensive than trional are mentioned as perhaps at the bottom of the fact that it is not being to a great degree superseded by trional in Great Britain, as is the case in Germany.

Sulphonal should not be given, says Dr. Gulland, if there is great prostration, if there is gastro-intestinal disturbance, especially constipation (for it is prone to be retained in the intestine and undergo slow absorption, with the result of proving cumulative in its action),

in cases of heart disease, in old people, or if there is a parenchymatous kidney lesion, acute or chronic. The maximum daily amount to be given to a man should be thirty grains, and to a woman from fifteen to twenty grains. It should never be given continuously, but pauses of at least three or four days should be allowed from time to time, to allow of elimination of the accumulated drug.

Dr. Gulland thus sums up the treatment of sulphonal poisoning: In the acute form, as the drug is absorbed but slowly, the stomach should be emptied if the patient is seen early enough, and spontaneous vomiting, if present, should be encouraged. Then purgatives may be given, to rid the intestine of the drug so far as possible. Every available means should be employed to keep the kidneys acting freely. Large enemata of warm water were found by Neisser to produce free diuresis in the case of a patient whose life he saved after 1,500 grains had been taken in a single dose, and probably it would be well to try them. For the rest, the treatment must be symptomatic. In chronic poisoning it is well to clear out the bowels and promote diuresis, but the best results have followed the free use of alkalis. Both the bicarbonates and the acetates or citrates should be given, to control the hæmatoporphyrinuria. Unless the poisoning is very slight, the prognosis is very unfavorable, no matter what remedies are used.

ACUTE POISONING BY HYDRASTIS CANADENSIS.

MIDONSKI (*Berliner klinische Wochenschrift*, No. 5, 1889; *Gazzetta degli ospedali e delle cliniche*, February 16th) relates the case of a man with chronic bronchitis accompanied by profuse bronchorrhœa, but without other lesions, for whom he prescribed twenty drops of fluid extract of *Hydrastis canadensis* three times daily to constrict the engorged pulmonary vessels and to diminish inflammation and secretion. The next night he was summoned in haste and found the patient livid, with his lips and tongue cyanotic, respirations frequent and accompanied by forced contraction of the auxiliary respiratory muscles. There were inspiratory râles, audible at a distance, and stridulous expiration. The pulse was small, compressible, and slow. There were cold sweats. On auscultation of the lungs grave symptoms of diffuse pulmonary œdema were found, the bronchial respiration being only faintly audible. The heart sounds were inaudible and the cardiac impact was not to be felt. Stimulants, as ether, wine, coffee, and sinapisms, restored the patient, who said that shortly after taking the last two doses he felt some difficulty of breathing, which continued to increase until it arrived at the point described. The author attributes these symptoms to a noxious action of the drug on the fibres of the myocardium causing acute dilatation. This view, he says, accords with Fellner's results obtained upon animals. The Italian translator suggests that another explanation is possible—namely, that the acute dilatation was caused, not by the drug's action on the cardiac

fibres, but by a sudden elevation of arterial pressure, the vaso-constrictor effect applying not only to the pulmonary vessels, but to the entire vascular system. Whatever be the explanation, it appears evident that the drug has a cumulative effect which, in the employment of large doses, no matter in what affection, must be carefully guarded against.

THE ACADEMY OF MEDICINE'S CONSIDERATION OF SYPHILIS.

SYPHILIS is a subject in which every practitioner of medicine is interested, whether his practice is general or special, in city or country. The disease is protean in its manifestations, and one or more of them may complicate any pathological situation; therefore it has to be borne in mind in all but the simplest cases of disease. Such a subject needs to be turned over, so to speak, from time to time in a thorough and systematic way, so that one's forgotten knowledge may be brought back and reinforced with fresh acquisitions. This kind of work, in our opinion, can not be done satisfactorily in an off-hand discussion of a paper read before a society. Hence we think it a particularly happy conception on the part of the president of the Academy of Medicine to have substituted for such a discussion the reading of a number of papers by observers peculiarly well qualified to present the subject from various points of view, and then to have arranged for their publication in a collected form. In this week's issue, in accordance with such arrangement, we present the papers by Dr. Bangs, Dr. Dawbarn, Dr. Fox, and Dr. Taylor, being those that were presented on the first evening devoted to the subject. It is unnecessary for us to speak of their merits, for their authors are widely known as masters of the matters of which they had to treat. As we have intimated, more than one evening was devoted to the consideration of syphilis, and we expect to bring out soon the papers that were presented in the further pursuance of the subject. We are glad to learn that it is Professor Thomson's purpose to treat other themes in the same manner, and that one of them is that of malaria and its effects.

THE SERRATED POISON-BOTTLE BILL.

It is an excellent provision to require dangerous poisons to be put up in receptacles having some peculiarity calculated to make the heedless take warning, but we must regard as pernicious that requirement of Senator Wilcox's bill, which, we understand, has been passed by the legislature of the State of New York, making it obligatory to put every medicine containing even the slightest amount of any poison (except patent and proprietary medicines) into an octagonal bottle with serrated edges and bearing indented or in-relief the traditional skull and cross-bones. There is hardly any medicine that is not poisonous, but to so proclaim a weak opiate mixture would be to rouse the apprehension of a timid patient, and perhaps aggravate his ailment, quite without reason. Moreover, if medicines put up on prescription are to be so treated, we fail to see why patent and proprietary preparations should be exempted. It has been suggested, moreover, that, if the use of such bottles is made compulsory, in a short time they will become very plentiful; they will not be destroyed after their special use, but will be employed to hold any harmless substance for which a bottle is re-

quired. It is easy to see that in the end, therefore, they will prove far more dangerous than ordinary bottles or phials. Their very oddity will be an incentive for preserving them.

DR. SCHENK AND PUBLICATION IN LAY JOURNALS.

We learn from the *Revue médicale* for March 22d, citing French newspapers, that the Academy of Science of Vienna has decided to discipline Dr. Schenk for having announced his alleged discovery regarding the production of sex at will through the medium of the lay press in place of making it public through the medical reviews—a course which the academy deems derogatory to his dignity as a savant. We cordially indorse the academy's opinion on this point.

A CURIOUS CASE OF APPENDICULAR COLIC.

PROTEAN indeed are the manifestations of trouble with the vermiform appendix. An interesting example is recorded by Dr. Goldbach, of Prague (*Prager medicinische Wochenschrift*, 1898, No. 16; *Centralblatt für innere Medizin*, March 18, 1899), that of a lad, sixteen years old, who for a year had suffered from frequent attacks of jaundice ushered in by vomiting and accompanied by colicky pains under the right ribs. The pains occurred particularly in the evening, and the attacks usually lasted about a week. There was no fever, but there was frequently constipation lasting for several days. After a time the pain became more restricted to the ileo-cæcal region and radiated backward. There was typical tenderness on pressure in the ileo-cæcal region, and there was a soft oval tumor on the surface of which the vermiform appendix could be felt. It shifted its position very freely, being found sometimes in the hepatic region and at other times in the lower part of the abdomen. At the patient's earnest solicitation, Dr. Wölfler performed laparotomy. The cæcum and the vermiform appendix itself were found perfectly normal. The appendix was rather more than three inches long. Two little concretions could be felt in the cæcum, and they could easily be shoved into the appendix. No narrowing of Gerlach's valve could be made out. This structure was removed, together with the concretions. The patient made a good recovery, and nine months later he was found to be in perfect health and free from pain, although he was accustomed to great bodily exertion. Dr. Goldbach thinks that the reason the pain was more pronounced in the afternoon in this case was that during the digestion of the dinner the concretions were forced into the vermiform appendix. This process took place every day.

PASSENGER SHIPS AS A MEANS OF CONVEYING TUBERCULOSIS.

DR. HENRY STRACHAN, chief medical officer, Lagos (*Journal of Tropical Medicine*, March), draws attention to the risk run by passengers to the West African colonies of contracting tubercle on the voyage, on board the ships conveying them. So many poor sufferers from phthisis, he says, form the majority of the passengers to Madeira and the Canaries at certain times of the year that the probabilities are great that most cabins will more or less be infected with tubercle, and it is by no means unlikely that a passenger will find himself or herself cabin mate with some *poitrinaire* whose expectoration is profuse and frequent, and whose cough is, at

night, most distressing. This is not as it should be in these days when all are agitating for the establishment of means for preventing the spread of what is acknowledged to be a communicable disease. Dr. Strachan suggests that cabins should be reserved for the use of invalids suffering from "chest complaints," or, if this is not possible, all cabins should be disinfected at the end of each voyage, and the bedding of the berths, or at least the pillows, renewed. In the meantime, he advises every traveler to take his own pillows with him. These remarks apply in a lesser degree to all passenger ships, and are worthy of careful consideration.

A CAUTION AS TO THE USE OF BALSAM OF PERU.

ALMOST any topical application may be productive of untoward effects in certain instances. An illustration of this fact was recently presented by M. Hallopeau and M. Léri at a meeting of one of the French societies (*Presse médicale*, March 11th), the case of a child with scabies in whom an application of balsam of Peru had provoked a pustular eruption. The statement was made that even death had been caused by the use of the balsam, and the caution was given not to apply it over a large surface or one that was the seat of excoriations.

THE REMOTE EFFECTS OF COMPRESSION OF THE FETAL HEAD.

In the March number of the new journal *Obstetrics* there is an editorial article in which the writer states that he has been unable to find in literature anything satisfactory bearing upon the effects upon the brain in adult life of forceps traction and head-molding in the birth of the individual. He intimates that such effects are probable, and suggests the subject as one deserving of elucidation. The suggestion seems to us worthy of careful consideration.

BOTANY AS A DIVERSION.

ACCOMPANYING a circular recently issued announcing summer courses in botany, to be given jointly by the Torrey Botanical Club and the College of Pharmacy of the City of New York, there is a slip stating that many patients have found in such courses a wholesome and grateful recreation for mind and body, and therefore calling physicians' attention to the circular. This is a good suggestion, it seems to us. There are many states of invalidism in which botanizing expeditions are well calculated to aid materially in bringing about recovery.

THE OVARIAN ORIGIN OF CHLOROSIS.

THE experience of several speakers at a recent meeting of the Nancy Society of Medicine (*Gazette hebdomadaire de médecine et de chirurgie*, March 26th) seems to support the theory of the ovarian origin of chlorosis. Several cases were mentioned in which the administration of ovarian extract had brought about a prompt restoration to health.

THE RECLAMATION OF RANCID BUTTER.

Lyon médical for March 5th states that rancid butter may be deprived of its disagreeable taste by working it

with water containing from three hundred to four hundred and fifty grains of chlorinated lime in rather more than two pints and a half, or containing a small quantity of sodium bicarbonate. When the unpleasant taste has disappeared, it is to be worked again with water, and it will then be found to have been reclaimed. Its appearance is improved, also its taste, by working it with milk. This is a matter well worthy of attention in connection with the provisioning of charitable institutions, ships, and the like.

A TYPHOID-FEVER ANTITOXINE.

DR. JEZ recently reported to the Vienna College of Physicians (*Presse médicale*, March 4th) certain observations which he took to indicate the curative effect of an extract made from various organs of rabbits killed after having been treated with intraperitoneal injections of virulent cultures of typhoid-fever bacilli. It is to be feared, however, that the evidence is not convincing enough to warrant us in building any great expectations on it, for it amounts only to the observation that the duration of the disease was abridged.

ESSENTIAL TREMOR IN AN HYSTERICAL MAN.

AT a recent meeting of the Paris Medical Society of the Hospitals (*Presse médicale*, March 4th) M. Antony presented a young soldier who had been affected with tremor of the right upper extremity since the age of seven years. On reading this part of the account, one naturally wonders that such a person should have been received into the French army, but as we proceed we find that, although there were certain hysterical stigmata, they were probably superadded, and the man's trouble was the essential tremor of degeneracy, one that, as M. Raymond remarked, could be moderated by an exercise of the will. The soldier's father was affected with alcoholism.

INTRAVENOUS SALINE INJECTIONS IN PUERPERAL MANIA.

AT a recent meeting of the Paris Obstetrical Society M. Boullé (*Presse médicale*, March 4th) related the case of a woman who made attempts at suicide during her pregnancy. Her labor was normal, but was followed at once by hallucinations, shrieking, a subicteric hue of the skin, a temperature of 101° F., and a pulse of 143, so that at first infection was supposed to have occurred. This diagnosis was discarded—why, is not stated; perhaps it was on account of the suicidal attempts before labor—and that of acute mania substituted. The treatment was the enforcement of an absolute milk diet and the use of intravenous saline injections. There was progressive amelioration, and soon the object of the first few days was succeeded by polymeria. Recovery was complete in sixteen days from the time of delivery.

THE ETIOLOGY OF ALOPECIA PRÆMATURA.

DR. J. M. BLAINE, in the *Transactions of the American Medical Association* for March 11th, expresses some novel views as to the etiology of premature alopecia baldness. Leaving out of consideration cases connected with syphilis and parasitic disease, he passes rapidly in review the reasons advanced by various authors for the fact that premature baldness is commoner in men than

in women, giving what appear to be good grounds for rejection *seriatim*, and then proceeds to adduce two sets of examples to show that this premature loss of hair from the scalp is due to the habit of shaving. The beardless races, Indians, etc., are noted for their luxuriant growth of hair on the scalp. Bearded savage races also are not deficient therein, because, in his opinion, they do not shave their beards. Shaving stimulates the growth of the beard to its utmost limit, causing hyperæmia of the face, and thereby lessening the supply of nutriment to the hair bulbs of the scalp. The beards of those who have become prematurely bald on the scalp, when subsequently allowed to grow, are rarely if ever affected. The facial artery, Dr. Blaine points out, branches off from the external carotid opposite the angle of the lower jaw, while the main artery finally bifurcates into the anterior and posterior temporal, which supply the entire scalp as far back as the occiput, or, in other words, the part which usually becomes bald. The nerve supply of the occipito-frontalis muscle is obtained from the facial nerve, hence nothing in the human economy could be brought into more intimate sympathy than the blood and nerve supply of the face and scalp. He suggests that in order to maintain the equipoise between the hair and the beard, every man should allow his hair to grow between the ages of twenty-five and thirty-five years. At first glance there is at any rate a good deal to be said in favor of Dr. Blaine's contention.

THE DELUSIVE CLIMACTERIC.

FULL many a woman, no doubt, has relied on her years as a safeguard against conception, and been sadly undeceived. It is somewhat startling, nevertheless, to learn from the *Journal de médecine de Paris* for March 12th that last year [1899 is printed, but we presume 1898 is meant] seventy-seven illegitimate children were born in France of mothers over fifty years old. The French people have been exercised for some time now over the decline of their birth rate. Let them take heart if this is what their old women can do.

CHILDBIRTH AMONG THE INDIANS.

It is customary to hear the arguments in favor of a more hygienic costume and more rational habits for women enforced by an appeal to the experience of uncivilized nations, which are singularly free from derangements of the female generative organs and from difficulties of parturition; and these matters are, therefore, with considerable reason, held to be largely induced by modern feminine dress and manners. But a still more startling evidence of the truth of that view is forthcoming in a paper by Dr. C. Bailey Bell, writing from Vinita, I. T. (*Medical and Surgical Bulletin*, February; *North American Medical Review*, March), who points out that in his experience, and in that of Dr. Fortner and Dr. Bagby, "who have done the largest practice in the Territory for years," the women of the five civilized Indian tribes who have learned to follow closely their white sisters in dress and habits of life suffer more frequent complications of parturition than are common among uncivilized Indian, or even white, women. This latter disparity the author considers due to the fact that the change of dress, habits, customs, etc., has been less the result of gradual evolution than of a sudden revolution. Even when the change is in the right direc-

tion, a radical and sudden change is rarely a good thing. Nature works its greatest wonders by slow and silent processes, and human nature would do well to imitate non-human nature in that respect. In the present instance, the more natural modes have exploded suddenly into the restraints of convention, and the result has not been fortunate. There are many points in which the present feverish haste of life might well retrace its steps gradually in the direction of simpler tastes, simpler aims, simpler needs, and simpler customs.

THE FUTILITY OF GARGLING.

THE laryngologists have often told us of the uselessness of gargles; and now Dr. Säger is cited by the *Lancet's* Berlin correspondent as having pointed out in the *Münchener medicinische Wochenschrift* that there can be no therapeutic effect from a gargle unless it comes in contact with the affected part, and as having demonstrated that it does not reach the pharyngeal mucous membrane and the tonsils. This he has done by brushing the tonsils with methylene blue and then making the person gargle with water, which was afterward ejected perfectly colorless. He also, in another set of experiments, dusted the throat with flour and then had the person use a gargle containing iodine. The blue color resulting from the reaction appeared only on the velum palati and the tongue.

THE LATE PROFESSOR CANTIERI.

THE Rome correspondent of the *Lancet* for March 25th describes with gentle and sympathetic pen the tragic end of Professor Cantieri, "The Nestor of the Sienese medical faculty," who, at the advanced age of seventy-eight, terminated his life by shooting himself with a rifle in his study. Letters left behind him showed that his weariness of life arose from the incessant strain upon him occasioned by his constantly having to pay debts contracted by his relatives, while at the same time his advanced age precluded the possibility of his earning an income adequate to this drain. He adds pathetically, *Non sono pazzo. Conosco e so pienamente quello che sto per fare* (I am not mad. I am fully conscious and aware of what I am about to do). As might be expected, the funeral of one who has all through his life been held in the highest esteem and regard by all with whom he came into contact was impressive and dignified to a great degree. It is lamentable when those who have labored diligently and faithfully are, through no fault of their own, driven upon the rocks in their later years, but it teaches a lesson much needed in these commercial days, that worldly success is by no means an evidence of worth, or *vice versa*.

ERUCTIONS OF INFLAMMABLE GAS.

IN its issue for March 12th the *Journal de médecine de Paris* recounts that Dr. Drouet, of Meulan, reports the case of a child, two years and a half old, whose throat he was examining with the aid of a tongue-depressor and the traditional candle, when a blue flame issued from the child's mouth, like that of a spirit lamp. It soon went out, but not until it had burned the doctor's mustache and the child's lips. We quite agree with our contemporary in the exclamation, *Il y avait de quoi!*

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending April 1, 1899:

DISEASES.	Week ending Mar. 25.		Week ending Apr. 1.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	8	3	8	6
Scarlet fever.....	155	21	173	16
Cerebro-spinal meningitis.....	0	13	0	11
Measles.....	283	11	259	12
Diphtheria.....	177	25	175	36
Croup.....	4	4	22	8
Tuberculosis.....	178	178	251	166
Small-pox.....	0	0	1	0
Chicken-pox.....	24	0	27	0

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general of the United States Marine-Hospital Service during the week ending April 1, 1899:

Small-pox—United States.

Los Angeles, Cal.....	Mar. 11-18.....	2 cases, 1 death.
Denver, Col.....	Mar. 4-11.....	1 case, 1 "
Denver, Col.....	Mar. 11-18.....	3 cases, 1 "
Washington, D. C.....	Mar. 25-29.....	5 "
Jacksonville, Fla.....	Mar. 23.....	12 " to date.
New Orleans, La.....	Mar. 11-18.....	5 "
Baltimore, Md.....	Mar. 25.....	1 case.
Kalamazoo, Mich.....	Mar. 11-18.....	2 cases, 1 death.
Buffalo, N. Y.....	Mar. 15-21.....	1 case.
Elmira, N. Y.....	Mar. 18-25.....	1 "
Cincinnati, Ohio.....	Mar. 11-18.....	2 cases.
Pottstown, Pa.....	Feb. 4-11.....	1 case.
Norfolk, Va.....	Mar. 30.....	1 "

Seman on S. S. Newport News.

Petersburg, Va.....	Mar. 4-11.....	1 case.
Portsmouth, Va.....	Mar. 22-25.....	51 cases.
Spokane, Wash.....	Mar. 11-18.....	2 cases.

Small-pox—Foreign.

Buenos Ayres, Argentina.....	Dec. 1-30, 1898.....	5 deaths.
Bahia, Brazil.....	Feb. 26-Mar. 1.....	3 cases.
Rio de Janeiro, Brazil.....	Feb. 10-17.....	5 " 1 death.
Cairo, Egypt.....	Feb. 18-Mar. 1.....	2 deaths.
London, England.....	Feb. 25-Mar. 11.....	1 " 1 "
Bombay, India.....	Feb. 11-21.....	1 "
Calcutta, India.....	Feb. 1-11.....	1 death.
Madras, India.....	Feb. 11-17.....	1 "
Nagasaki, Japan.....	Feb. 11-21.....	1 case.
Mexico, Mexico.....	Mar. 5-12.....	7 cases, 4 deaths.
Mexico, Mexico.....	Mar. 12-17.....	7 " 1 death.
Moscow, Russia.....	Feb. 19-26.....	10 " 1 "
Odessa, Russia.....	Mar. 1-11.....	1 case.
Warsaw, Russia.....	Feb. 25-Mar. 11.....	6 deaths.
St. Petersburg, Russia.....	Feb. 25-Mar. 11.....	5 cases.

Yellow Fever.

Rio de Janeiro, Brazil.....	Feb. 10-17.....	57 cases, 57 deaths.
Barraququilla, Colombia.....	Feb. 18-25.....	2 " 2 "
Barraququilla, Colombia.....	Feb. 25-Mar. 1.....	1 case, 1 death.
Vera Cruz, Mexico.....	Mar. 16-23.....	2 deaths.

Cholera.

Bombay, India.....	Feb. 25-Mar. 4.....	1 death.
Calcutta, India.....	Feb. 4-11.....	17 "
Calcutta, India.....	Feb. 11-18.....	26 "
Madras, India.....	Feb. 18-21.....	1 death.

Plague.

Bombay, India.....	Feb. 25-Mar. 4.....	17 deaths officially reported.
Calcutta, India.....	Feb. 4-11.....	Probably 1,000.
Calcutta, India.....	Feb. 11-18.....	1 death.

A Memorial of the Late Dr. Joseph O'Dwyer.—A committee of over forty physicians, representing sixteen different medical societies of the city of New York and including representatives of both schools of medicine, has been formed for the purpose of doing honor to the memory of Dr. Joseph O'Dwyer.

The first meeting was held at the New York Academy of Medicine, on November 22, 1898, under the chairmanship of Dr. Joseph D. Bryant, and was mainly devoted to organization. Dr. George F. Shrady was elected permanent chairman, and Dr. Alfred Meyer permanent secretary, and the following committee on scope and plan was appointed: Dr. Dillon Brown (chairman), Dr. Robert Abbe, Dr. R. G. Freeman, Dr. L. Emmett Holt, and Dr. Louis Fischer. At the second meeting, held at the Academy of Medicine on March 13, 1899, the report of the committee on scope and plan was adopted and now only awaits final action of a meeting of the full committee.

The memorial to Dr. O'Dwyer will probably take an educational form, for by the plan now outlined it is proposed to raise a fund of thirty thousand dollars, the interest of which shall support two O'Dwyer fellowships in paediatrics, open to competition by physicians who graduate in the United States and to be held by the successful competitors for a period of two years. During this period they must furnish satisfactory proof of their engagement in original research work to a committee of five, one of whom shall be appointed by the president of Harvard University, one by the dean of the Johns Hopkins Medical School, one by the provost of the University of Pennsylvania, one by the president of the University of Chicago, and one by the president of the New York Academy of Medicine.

Many details of this general plan are still to be arranged, which the secretary will furnish to the medical press of the country so soon as they are finally decided upon. This preliminary notice has for its object merely to acquaint the profession with the fact that a movement of this nature is on foot, and that an effort will be made to give it the international character so fitting as a memorial to an investigator of international reputation.

"Zoolak."—This is an additional trade name recently adopted by Dr. M. G. Dadirrian, of New York, to distinguish the excellent nutritive preparation known as matzoon which he has furnished to the profession for the last fifteen years or more. In order to be sure that their patients will get a matzoon that is recognized as the standard, physicians should henceforth prescribe "zoolak."

The Medical Society of City Hospital Alumni, of St. Louis.—At the last regular meeting, on Thursday evening, the 6th inst., Dr. Charles Fahnestock reported a Case of Pulmonary Tuberculosis with Tuberculous Ulcers of the Oesophagus; Dr. Robert Terry exhibited gross sections of the human body, and Dr. Greenfield Sluder exhibited specimens of the nose and demonstrated methods of preservation.

A Foreign Military Medical Officer's Views on the Spanish-American War.—Major General Paulow, surgeon-general of the Norwegian Army and Navy (*St Paul Medical Journal*, April), who attended the American operations in Cuba, thus sums up the results of his interesting observations: "To give a brief resume of what I learned on my visit I must first mention that it was of

great interest to become acquainted with the organization of American sanitation, and to see how the Americans with their practical sense understood how to quickly organize new detachments and supply them with *personnel* and equipment. But I saw also how impossible it was, even with America's immense resources, to prepare even a small force in the beginning of the war, and I learn further, how little one can depend upon untrained masses, and how necessary it is for every nation who thinks of defending itself against regular armies to have everything down to the minutest detail in good shape, and to afford every one from the private to the highest officers in all their relations the greatest possible practice."

The St. Louis Medical Society.—At the last meeting, on Saturday evening, the 1st inst., the following papers were presented for discussion: A Capsulo-tenectomy; the most Accurate and Dependable Operation for Certain Cases of Squint of Insufficiency of External Eye Muscles, by Dr. F. W. Hilscher; Fat Metabolism, by Dr. T. C. Witherspoon; and The Surgical Treatment of Certain Forms of Sexual Impotence, by Dr. G. Wiley Broome.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Surgery, on Tuesday evening, the 4th inst., Dr. Roswell Park read a paper on Acute Osteomyelitis, which was discussed by Dr. Herman Mynter, Dr. Hartwig, and others. Dr. Chauncey P. Smith reported a case.

The Japanese and Sanitation.—The *Texas Medical Journal* for March says that the Japanese believe in sanitation. The town of Teukchem, on the island of Formosa (taken from the Chinese), has a population of forty thousand, with a high death-rate. It is situated in a swamp, and can not be drained. The government has caused the inhabitants to pull up, root and branch, and move to a higher site, some miles off, giving to each householder the same size lot as he had at home, and—as the new town was laid off somewhat after the pattern of the old one, except that the streets are wider—a location corresponding to the one he vacated. The government put in sewers, water, light, etc., at public cost.

The writer adds: I wish we had a Japanese governor and legislature in Texas.

A New Hospital for Brooklyn.—We understand that a scheme is on foot to supply a new hospital for Brooklyn, to be called the Breadwinner Hospital, which, while it will depend largely upon voluntary contributions, will derive part of its maintenance income from the payments exacted, according to their means, from the patients themselves. It will therefore enable the really worthy poor to accept hospital relief without pauperizing themselves. Dr. Skene is interested in the new institution, being on the medical board.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 25 to April 1, 1899:*

BANISTER, WILLIAM B., Captain and Assistant Surgeon, is detailed as a member of the examining board appointed to meet at Augusta, Georgia.

BOWEN, WILLIAM C., Captain and Assistant Surgeon, is detailed as a member of the examining board appointed to meet at Washington.

BRATTON, THOMAS S., First Lieutenant and Assistant Surgeon, will report to the examining board appointed to meet at Washington for reexamination for promotion.

DEAN, ELMER A., First Lieutenant and Assistant Surgeon, is detailed as a member of a board of officers appointed to meet at St. Paul for the examination of officers for promotion.

DOTCHER, BASIL H., First Lieutenant and Assistant Surgeon, is granted leave of absence for two months, to take effect upon the completion of his duties as a member of the examining boards at Fort Leavenworth, Kansas, if his services can be spared.

EDIE, GUY L., Major and Brigade Surgeon, is relieved from further duty at the Presidio of San Francisco, and is assigned to duty with troops sailing on the first transport from San Francisco to Manila.

GIRARD, ALFRED C., Lieutenant-Colonel and Chief Surgeon, is relieved from further duty with Second Army Corps, and will proceed to Vancouver Barracks, Washington, and report to the commanding general, Department of the Columbia, for duty as chief surgeon of that department.

GLENNAN, J. D., Major and Brigade Surgeon, is detailed as a member of the board of officers appointed for the examination of enlisted men serving within the department who may desire to take the examination for appointment as second lieutenant in the regular army.

GREENLEAF, CHARLES R., Colonel and Assistant Surgeon-General, will proceed to Fort Monroe, Newport News, Savannah, Atlanta, and Greenville to inspect the medical department at those stations.

HALLOCK, HARRY M., Captain and Assistant Surgeon, is relieved from further duty at the Josiah Simpson General Hospital, Fort Monroe, Virginia, and will proceed to Fort McPherson, Georgia, and report to the commanding officer at that post for duty.

HOWARD, DEANE C., Captain and Assistant Surgeon, is detailed for temporary duty as attending surgeon, New York, and will report to the commanding general, Department of the East.

IRELAND, M. W., Captain and Assistant Surgeon, will proceed to Chicago to assist in examining members of the Eighth Illinois Volunteer Infantry.

MANLY, CLARENCE J., First Lieutenant and Assistant Surgeon, is relieved from further duty with Batteries G and I, Second Artillery, Department of Havana, and will report to W. H. ARTHUR, Major and Surgeon, commanding the hospital ship *Missouri* at Havana, for duty.

PILCHER, JAMES E., Captain and Assistant Surgeon, is granted leave of absence for four months on account of sickness.

RAYMOND, HENRY L., Captain and Assistant Surgeon, will proceed to Fort Porter, N. Y., to accompany the Thirtieth Infantry to Manila.

SNYDER, HENRY D., Captain and Assistant Surgeon, will proceed at once to Savannah, Georgia, to take charge of the medical supply depot in that city, and relieve JAMES E. PILCHER, Captain and Assistant Surgeon.

SWIFT, E. L., Captain and Assistant Surgeon, is relieved from temporary duty in New York and will return to Fort Slocum, N. Y.

VAUGHAN, VICTOR C., Major and Division Surgeon, United States Volunteers, and SHAKESPEARE, EDWARD O., Major and Brigade Surgeon, United States

Volunteers, are assigned to duty in Washington, for an additional period of two months, for the purpose of completing their report.

WILSON, WILLIAM II., Captain and Assistant Surgeon, will proceed to the Josiah Simpson General Hospital, Fort Monroe, Virginia, for duty.

The Society of Medical Jurisprudence.—At the next meeting, on Monday evening, April 10th, Mr. Gino C. Speranza, of the New York Bar, will read a paper entitled *Natural Law vs. Statutory Law*.

Changes of Address.—Dr. Sidney V. Haas, to "The Blenheim," 2493 Broadway, New York; Dr. Theron W. Kilmer, to 170 West Eighty-fifth Street, New York.

Society Meetings for the Coming Week:

MONDAY, April 10th: New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, April 11th: New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Societies of the Counties of Jefferson (quarterly), Oneida (annual—Utica), Ontario (quarterly), Rensselaer, and Tioga (quarterly); Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Bergen (annual—Hackensack) and Cumberland (annual), N. J., County Medical Societies; Fairfield, Connecticut, Medical Association; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, April 12th: New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Tri-States Medical Association (Port Jervis), N. Y.; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society; Kansas City, Missouri, Ophthalmological and Otolological Society.

THURSDAY, April 13th: Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; New York Laryngological Society; South Boston, Massachusetts, Medical Club (private); New London, Connecticut, County Medical Society (annual); Pathological Society of Philadelphia.

FRIDAY, April 14th: New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

Births, Marriages, and Deaths.

Married.

McLAURY—NEFF.—In Philadelphia, on Wednesday, March 29th, Dr. Daniel Henry McLaury, of New York, and Miss Sarah Josephine Neff.

PERINE—BENNET.—In Brooklyn, on Monday, April 3d, Mr. William De Nyse Nichols Perine and Miss Mae Bennet, daughter of Dr. George H. R. Bennet.

Died.

ASHWIN.—On Tuesday, March 28th, Dr. Edward Hilborne Ashwin, of Brooklyn, in the fifty-fifth year of his age.

CHASE.—In New York, on Saturday, March 25th, George Abbot Chase, only child of Dr. George T. Chase.

ENTLER.—In Oneonta, N. Y., on Monday, April 3d, Dr. George F. Entler, aged forty-nine years.

FIELDS.—In New York, on Thursday, March 30th, Mrs. Emma Fields, wife of Dr. William J. Fields.

PENDLETON.—In Pine Bluff, Arkansas, on Sunday, March 26th, Dr. Pleasant H. Pendleton, aged forty-five years.

SEAMAN.—In New York, on Wednesday, March 29th, Valentine Seaman, father of Dr. Louis L. Seaman, in the ninety-seventh year of his age.

SHAAKE.—In Lawrence, Massachusetts, on Monday, March 27th, Dr. Frederick H. Shaake, in the thirty-fifth year of his age.

VISSMAN.—In Morristown, N. J., on Wednesday, March 29th, Dr. William Vissman, in the thirty-fourth year of his age.

Special Articles. •

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

XIII.

RIGHTS AND LIABILITIES OF THIRD PARTIES.

(Continued from page 496.)

Ratification.—While the railroad company is ordinarily under no obligation to pay for the services of a physician employed by an employee or inferior officer, it frequently happens that the company becomes liable for the payment of a physician's fee when he is primarily so employed, through the ratification of such employment by the conduct of the higher officers of the company.

It is a well-established rule of law that such a hiring can not be ratified excepting by an officer whose power and authority are sufficient to enable him to make the contract primarily which he assumes to ratify by subsequent words or conduct.*

The question of whether or not the facts in a given case amount to a ratification of an unauthorized hiring is usually one for the jury to determine. The doctrine can therefore be better illustrated by examining a few cases than in any other way.

* T. W. and W. R. R. Co. v. Rodriguez, 17 Ill., 189.

In the case of *Pacific Railroad Company vs. Thomas*, a physician was employed by the assistant master mechanic and the section boss to attend an employee who was injured. This hiring did not have the effect of obligating the company to pay the physician for his services, notwithstanding both the section boss and assistant master mechanic said that they would see that the railroad company paid him; but the physician, before he had finally completed the services, sent a letter to the superintendent of the railroad, explaining the circumstances of his employment and inclosing a bill for his services. The superintendent paid no attention to this letter and bill. The jury found upon this evidence that the superintendent had by his acquiescence ratified the original contract of hiring.*

The station agent requested one Rodrigues to nurse and take care of a brakeman who had been injured, and told him that the railroad company would pay him for the services. Soon after he wrote to the general superintendent, informing him what had been done, but received no reply. Rodrigues, after performing the services, presented his bill to the station agent for payment. Soon afterward the superintendent conferred with the station agent in reference to the various items, and as to whether the charges were reasonable. The superintendent made no objection at the time, but said if the charges were reasonable he would pay the account. This was held a ratification.†

In the case of the *Terre Haute and Indiana Railroad Company vs. Stockwell*, the conductor of a train which ran into and injured a man employed a physician to dress the wound and take care of the injured man. He then sent a telegram reporting the affair to the general superintendent and general agent, and that evening, upon arriving in St. Louis, he reported to the general superintendent in person that he had struck a man and had employed a physician to dress his wounds. The physician, after rendering the services, addressed a letter to the president of the company, stating the circumstances of the employment, the services he had rendered in a general way, and demanding pay therefor. The railroad company never questioned or repudiated the employment as made by the conductor, not even after receiving the physician's letter. From this evidence the court found that the employment of the physician by the conductor was ratified and confirmed.‡

Where the station agent employed a physician to treat an injured employee with the understanding that the company would pay, and the general superintendent on the following day came to the town where the injured employee was and inquired of the station agent regarding him, and seemed to be informed regarding the character of the injury and the treatment of the surgeon, but made no objection or complaint in reference to the action of the station agent in employing a surgeon, of which he was apprised, and a few weeks later the general superintendent in conversation with the physician informed him that the pay would be all right, the contract of the station agent was considered ratified.§

In the case of *Toledo, Wabash, and Western Railroad Company vs. Prince*, a surgeon was employed by

the station agent to take charge of a wounded man. The station agent reported the case to the general superintendent a few days afterward, and heard nothing further until he presented the bill. The superintendent then refused payment. The jury found a verdict for the plaintiff on the ground of ratification. The supreme court of Illinois sustained the judgment of the trial court, and in commenting on the case said: "If the superintendent desired to save the company from being held responsible, he should, on receiving the report of the case, have dissented from the action of the station agent, and directed him to apprise the surgeon of such dissent, instead of allowing the latter to continue his services under the belief that he was in the employ of the company."*

In apparent conflict with this and some of the preceding cases is a recent case decided by the supreme court of California, upon a statement of facts very similar to the case above given. The trial judge instructed the jury that if the defendant knew that the plaintiff was treating the injured man on its account, and relied for compensation on the defendant, and the defendant made no objection thereto, then the defendant was liable. Upon this instruction the jury rendered a verdict for the plaintiff, but the supreme court reversed the judgment, stating its reason as follows: "We conclude that knowledge upon the part of defendant that the plaintiff was rendering services to the injured man, and also knowledge of defendant that plaintiff was relying on it for compensation for the performance of such services, taken in connection with the fact that defendant, possessing such knowledge, made no objections thereto, are circumstances wholly inadequate to create a legal liability against defendant."†

While those physicians living in the States in which the cases above cited were determined know how the courts of their respective State will hold, those living in States where the particular question has not been adjudicated can not predict with certainty which precedent their courts will follow; it therefore behooves them to be well within the requirements of the rule recognized by the California courts. To do this, a physician should immediately upon being employed by an inferior officer or agent of a company to render services for such company, write to some officer who has power to make such a contract, informing him of the hiring, stating that he has undertaken the treatment of the patient on behalf of the company and expects them to pay his fee; and if the agent originally hiring him is without authority so to do, he desires to be informed at once and to be instructed whether or not to proceed with the treatment of the patient.

In the case of *Burke vs. Chicago and West Michigan Railroad Company*, a physician who was attending an injured employee, not having been employed in the first instance by any one assuming to act for the railroad company, attempted to fix the liability upon the company by virtue of a letter which he received from the chief surgeon of the company, which was as follows: "I am informed that you are now attending —, an employee of the Chicago and West Michigan Railroad Company, who was injured a few weeks ago. Will you be kind enough to inform me as to his present condition? Has he completely recovered? I would

* *Pac. R. Co. vs. Thomas*, 19 Kan., 256.

† *T. W., and W. R. R. Co. vs. Rodrigues*, 47 Ill., 189.

‡ *Terre Haute and I. R. Co. vs. Stockwell*, 20 N. E. Rep., 659; 118 Ind., 98.

§ *Chicago and St. Louis R. Co. vs. Mahoney*, 82 Ill., 73.

* *Toledo, Wabash, and Western R. Co. vs. Prince*, 50 Ill., 27.

† *Deane vs. Gray Bros. Artificial Stone Paving Co.*, 42 Pac. Rep., 413; 109 Cal., 433.

like a history of the case since you took charge of it. Please send your bill for services, itemized to me, if you are through with the case." It was shown by the company that the chief surgeon had no authority to employ a physician or surgeon to act generally in a case, but only to act temporarily in case of emergency; moreover, the court held, there being no original employment by a representative of the railroad company, the chief surgeon's letter could not be construed a ratification of such employment, even though ratification were authorized by him, nor could the letter be construed as a contract of employment.*

Liability of Counties and Towns for Services to Paupers.—Another prolific source of litigation is the question of the liability of counties and towns for medical services rendered to their paupers. This right is based upon statutes which differ in the several States; therefore a satisfactory treatment of the subject will necessarily be by States, and will require a greater amount of space than should be devoted to the subject in this chapter.

The various States have enacted laws calculated to afford relief to the distressed poor who through age, disease, or other infirmity are unable to provide necessary food, clothing, shelter, and medical attendance for themselves; but the extent of the class included in such charitable enactments, as well as the extent of the aid afforded them, varies considerably. In some States only those poor people are entitled to medical attention at public expense who have been formally declared paupers by the proper tribunal; while in others all persons unable to pay for necessary medical attention, whether declared paupers or not, and in some States whether residents or non-residents, are entitled to have their physicians' bills paid from the town or county treasury. In some States, if the officer whose duty it is to authorize the medical treatment of a poor person wrongfully withholds such authorization, the physician must secure authority by appeal to the proper tribunal, treat the patient at his own cost, or leave him to suffer without attention. In others he may treat the patient and sue for and recover the value of his services, notwithstanding the wrongful withholding of authority for such treatment. In case of an accident, where persons without property or ability to pay for their own medical treatment are severely injured, the physician may in some States give them immediate attention and recover from the town or county the value of such services; while in others he must leave the patient to suffer and perhaps die while he secures instructions from the overseers of the poor to render medical services, if he collects the value of such services.

The liability of the town or county for medical attendance upon prisoners confined in the county jails is also subject very largely to the regulation of local statutes.

(To be continued.)

Pith of Current Literature.

A New Method of Expelling the Placenta.
Credé's method, in which downward compression is exercised on the fundus uteri without any counter sup-

port, being not altogether free from danger, M. R. Boudberg (*Vratch; Gazette de gynécologie*, December 15th) recommends the following procedure: The abdominal wall being relaxed, one hand is placed on the fundus, the four fingers being pressed in behind it, while the thumb and thenar eminence grasp it in front. The other hand, the cubital border resting on the pubes, grasps the lower portion of the uterus, the thumb on one side, the fingers on the other. Great gentleness is requisite. When the uterine contractions begin the hands assist in the expression. The pressure must be augmented and diminished very slowly. The relaxing of the pressure especially must be slow, and never complete, but maintained to a slight extent during the intervals. These manoeuvres are repeated with every pain. When the abdominal wall is too thick, or the confinement has been premature, and it is impossible to grasp the uterus with both hands as described, the author recommends the introduction of two fingers into the vagina, when by opening them so that their tips are in the two *culs-de-sac* the necessary counter support is afforded to the downward pressure caused by the compression of the other hand on the fundus.

Use your Eyes.—Mr. Herbert Page, F. R. C. S. (*St. Mary's Hospital Gazette*, February), says that it was a favorite maxim of the late Sir George Humphry, whose memory is revered by all Cambridge men, that in clinical investigation we ought to make use of "the eyes first and much, the hands next and least, the tongue not at all." The utterances of such a man, he says, deserve to be recalled, for he was great as a surgeon, and incomparable as a teacher, of whom it has been well said that "his acknowledged pre-eminence as a teacher was mainly due to his insisting upon accuracy."

Mr. Page illustrates his meaning by two examples from a recent clinical examination, which he describes as follows: A girl about thirteen years of age had met, at the age of seven, with an injury to the right shoulder, and now presented herself with a stiff shoulder joint, and with the humerus on the affected side nearly three inches shorter than its fellow. Candidate after candidate went up to the patient, and failed to recognize this obvious difference between the two arms, some from sheer inability to observe, others because the first step of their examination was to use their hands, where-with the shoulder and the limb were immediately hidden from view. The clue to the diagnosis of this case was clearly the shortening of the limb, which a trained eye would have seen at once; and as a matter of fact the one man who quickly made the correct diagnosis of separated epiphysis did so simply because his observing eye had seen it. It will hardly be believed that one candidate was sent back four times to this patient, with an increasingly broader hint each time from the examiner what it was he was to look for, and even then he failed to see.

Again: There lay upon the table a little boy, stripped as to his abdomen and legs. One after another of the candidates proceeded to waste precious time by directing manual examination to the ankles, knees, or thighs, without even a gleam of suspicion of what was the matter with the child. And yet the eye ought immediately to have seen that the lower left quadrant of the abdomen did not move in respiration as well as the right, that there was evident fullness in this region, and that the left thigh was a trifle flexed. Had these things been

* Burke vs. Chicago and W. M. Ry. Co., 72 N. W. Rep., 907 (Mich.).

seen, examination would then surely first of all have been directed to this fullness, and accurate observation would have revealed that flexion of the left thigh as compared with that of the right was decidedly impaired. Yet no one either saw the one or detected the other. The clew was missed, and it occurred to none save one to look at the spine, and there to discover in the large angular curvature, which almost cried for recognition, the confirmatory evidence of a common or garden psosas abscess.

A Good "Christian Science Cure" Missed.—The *Medical News* for March 25th, citing the *Trained Nurse* for March, 1899, says that a woman was recently taken to the Seney Hospital, Brooklyn, suffering from what appeared to be an abdominal tumor. The surgeons examined her and fixed upon a day for operating. Just before the time set the woman arose, dressed herself, and walked out of the hospital. She had been "cured" by fright. If she had got into the clutches of a Christian Scientist another "miracle" might have been reported.

Congenital Immunity to Syphilis.—Dr. George Ogilvie (*British Journal of Dermatology*, March), in a paper on this subject, says that from the evidence adduced the following conclusions may be drawn: 1. No facts exist to prove that paternal syphilis ever confers immunity, partial or complete, upon the offspring, no matter whether at the time of procreation the father is actually syphilitic or has become immune to syphilis by previous disease. 2. No facts exist to prove that maternal syphilis in its tertiary stage confers immunity, partial or complete, upon the offspring, or that the mother's immunity to syphilis acquired by previous disease is ever hereditarily transmitted to her child. 3. It seems certain that mothers syphilitic before delivery rarely communicate the disease to their offspring in extra-uterine life. Such contamination has been observed in some cases of postconceptional syphilis. Whether it ever occurs in preconceptional syphilis we do not know.

In preconceptional syphilis two circumstances co-operate toward this result: *a.* That it is exceptional for mothers with preconceptional syphilis, who give birth to healthy viable children, to present infectious lesions after delivery, from which the child's infection could be derived. *b.* That infection by nursing, after the first year, from a woman's infection, is altogether exceptional.

In postconceptional syphilis also, two points have to be taken into consideration: *a.* That postconceptional syphilis is relatively rare. *b.* That acquired syphilis appearing in the child after the second month of life may, in not a few instances, have been mistaken for congenital syphilis, simply because the mother's syphilis dated back to a period previous to delivery.

These circumstances, taken together with the effect of timely and appropriate treatment, may explain—to a certain extent, at least, he thinks—the child's apparent immunity from infection by its mother. Whether this explanation is altogether sufficient, or whether we have to recur to the supposition of immunity to syphilis in the child, he is unable to say. This could be finally settled only by the comparison of large numbers of observations, which are at present unobtainable. If secondary syphilis in the mother confers immunity *in utero* on the child which escapes intra-uterine infection, such immunity appears to be neither constant nor lasting. To explain the so-called "exceptions" by the

late period of pregnancy at which the mother's infection takes place is, he says, an hypothesis not altogether consistent with the clinical evidence which it is meant to explain. Particular stress is laid upon this point by Hoehsinger. But Finger's table of fifty cases of post-conceptional syphilis seems, on the other hand, to demonstrate that intra-uterine infection of the fœtus may take place before the secondaries of the mother appear. There is no ostensible reason why the same should not apply to immunization, in particular if it is due to toxins, which in all probability would be present in the circulation before the appearance of the skin eruption.

The child's intra-uterine immunization by its mother's secondary syphilis he considers an interesting and ingenious theory not abundantly supported by facts. That such immunization seems to take place in some acute infectious diseases, either *in utero* or by suckling, does not, he thinks, materially enhance its probability with regard to syphilis.

Aphasia in Typhoid Fever.—Lopriore (*Gazzetta degli ospedali e delle cliniche*, January 5, 1899; *Presse médicale*, February 25th) records a case in which, on the seventeenth day of typhoid fever, when the temperature was very high, 106.8° F., the patient, a little girl ten years old, began to cry, to move her lips and tongue as though desirous of talking, and to show great distress, but was unable to articulate a word. The child understood what was said to her, and there was no paralysis of the limbs. The motor aphasia persisted a month and a half in spite of the reeducation of speech undertaken by the mother so soon as convalescence was established. The author attributes the aphasic phenomena to a septic microbial embolus of that branch of the Sylvian supplying the centre of Broca. Whatever may be thought of this explanation, says the French translator, the case deserves publication on account of its rarity.

A Case of Fatal Hæmorrhage from the Conjunctiva.—Allison J. Abbe (*Annals of Ophthalmology*, January; *Medical and Surgical Monitor*, March 15th) reports the case of a newborn babe, born at full term, but only weighing five pounds, in which death occurred on the second day from hæmorrhage from the conjunctiva. The left upper lid appeared red and swollen when the infant was bathed. This increased so that it became everted spontaneously when the eye was opened. The next morning a straw-colored discharge appeared when, by mistake, a drop of six-per-cent. instead of a two-per-cent. solution of nitrate of silver was dropped into the eye. At eleven o'clock bloody oozing began, which became a steady trickling by 3 p. m. At 4 p. m. bleeding began from the right eye. Any handling of the lids made the bleeding worse. On everting the lids the upper one had a "dark purple, rough, adherent mass" over its whole surface. The conjunctiva of the globe and the cornea were clear. The bleeding continued until midnight, when the child died. The cause of the hæmorrhage is not known. Several other cases of severe hæmorrhage from the conjunctiva have been reported.

"Huchard's Sign" of High Arterial Tension.—Huchard (*Presse médicale belge*; *Revue médicale*, March 15th) calls attention to the following phenomenon: In the normal state the number of pulsations diminishes from six to eight beats when a person changes from the vertical to the recumbent position. From numerous observations the author finds that in subjects of hyper-

tension this deviation in the pulse rate tends to disappear, and may even become reversed. When this reverse takes place it is a sign of arterial hypertension. It is asserted that by this means hypertension may be clinically measured without the sphygmograph.

Sudden Death during an Attack of Hepatic Colic.—M. Chaffard (*Indépendance médicale*, February 1st) recently reported to the *Société médicale des hôpitaux* the case of a woman forty-seven years of age who for seven days had been suffering from a violent attack of hepatic colic. She was an alcoholic, and had had numerous attacks, some grave, prolonged, and accompanied by jaundice, others mild and without jaundice. The present attack was the most severe and the longest of all. Moreover, slight jaundice had been present from the second to the fourth day, abundant epistaxis had occurred on the third and sixth days, metrorrhagia on the fourth, and there were, in addition, agitation and nocturnal delirium. The patient clamored for an injection of morphine. There was no sign of cardiac collapse and the temperature in the vagina was only 98.2° F. About a seventh of a grain of morphine was given hypodermically. Half an hour later, when the pain had been assuaged, the patient was found dead in bed. At the autopsy the liver was found normal; the gall bladder neither dilated nor atrophied, but containing a dozen calculi, large and small, and a considerable quantity of a whitish, semitransparent, viscous liquid, which, on analysis, contained neither bile acids nor pigments. A calculus as large as a dwarf pea was firmly imbedded in the duct immediately above the hepatic duct, firmly fixed, and completely obstructing the lumen. The heart was healthy, without clots, and contracted in systole. All the other organs were sound.

Was death due to reflex syncope? That is not likely, since it occurred not during the paroxysm, but after the suffering was quieted. Moreover, in syncope the heart is arrested in diastole, not systole. The most plausible explanation assigns a toxic cause for death. Several conditions concurred to lessen the resistance of the organism—alcoholism, nervous exhaustion due to seven days' suffering, anemia due to repeated hemorrhages, and self-intoxication of hepatic origin. In these conditions even a small dose of morphine may prove dangerous. To this the *Gazette hebdomadaire de médecine et de chirurgie* for February 2d adds that nervous exhaustion and hypothermia must be taken into account in cases of this kind. Morphine must either be avoided, or given according to the suggestion of M. Ferrand by adding an equal amount of ether to that of the morphine solution used.

An Experimental Study of "Visions."—Dr. Morton Prince (*Journal of the Boston Society of Medical Sciences*, December 6th and 20th), in the abstract of a paper read before the society, says that it is well known that certain persons have the faculty of creating vision at will, usually by the process called "crystal gazing", but it is not so commonly understood that "spiritistic mediums" artificially cultivate the seeing of vision by practically the same method.

Visions thus created, he says, probably do not differ in genesis from those occurring spontaneously in normal persons, and may be the product of the same psychical laws as are some of the hallucinations of the insane. In almost all observations hitherto reported it has been impossible to thoroughly investigate the relation of the

visions to antecedent events in the subject's life, beyond the waking memory of that person, but with the author's subject it was possible to hypnotize and obtain two additional and distinct personalities, and thus revive facts long forgotten by the normal personality.

The visions could be divided into three groups: *a*. Including revivals of past visual experiences, either conscious or subconscious. *b*. Others, not revivals, but largely newly created visual repetitions of past experiences other than visual. *c*. Neither revivals nor representations of past experience (visual or other) so far as known.

The mode of producing the hallucinations was to have the subject gaze into a glass bulb, when, after a few seconds, she saw various scenes acted before her.

The visions were not seen as small objects reflected in or on the glass bulb, but the bulb disappeared and the scene described appeared before her, the characters being life-size and like living persons. The visions were like ordinary hallucinations or vivid dreams, the scenes real, of life size, but dissociated from the subject's surroundings. In two experiments of the first class the vision was a representation of past experiences of the subject, but which had been forgotten. In Experiment III certain things were portrayed which the waking consciousness apparently never perceived, but which were seen by the so-called unconscious part of the mind. In Experiment IV an absent-minded and a somnambulistic act were seen in the glass. In Experiment V a complicated series of acts done in the delirium of pneumonia reappeared as a vision. Experiment VI shows how a vision may be constructed out of certain past familiar and certain other experiences of which no optical images could have been had—a new synthesis of images being created by the force of imagination and known facts. Experiment VII probably represented something she had read, etc.

The author draws the following conclusions:

1. Visions in sane persons may be revivals of past visual experiences which originally may have been conscious or subconscious. The original subconscious experience may have occurred in a moment of absent-mindedness, or may not have been sufficiently intense to have entered consciousness, or (rarely) may have occurred in somnambulism.

2. The vision, instead of being a revival, may be a newly created pictorial representation of a past experience other than visual. That is to say, past impressions of one or more senses (touch, hearing) and actions may translate themselves into representation by another sense as a vision.

3. It is probable, though not proved, that a vision may not reproduce or represent any past experience, visual or other, but may be newly created out of something the subject has read, heard, or thought. The inference from, and passing thoughts about, known facts may weave themselves into visions. This was probably the origin of the visions of Joan of Arc and religious enthusiasts.

4. Visions may partake more or less of the characteristics of these classes, being partly revivals, partly representations of actual non-visual experiences, and also of the subject's knowledge, inference, and thoughts.

5. Generalizing, it is possible that hallucinations of the other senses, especially of hearing, and such as are exhibited by trance mediums, may have a similar origin and composition.

6. Analogous phenomena may be observed in the

attacks of hysterics where the passing thoughts in the normal state may appear as insistent ideas in the attack.

7. It is probable that thoughts which have strongly absorbed the mind and expressed the longed-for ambition or ideas and beliefs of the subject may appear as visions. The subjects are then apt to look upon them as inspirations. In this way may have arisen the visions of political personages like Joan of Arc, Bismarck, and religious enthusiasts like Luther, Peter the Hermit, Catherine of Sienna, and others.

8. Visions, artificially created, may be representations and revivals of the experiences of the hypnotic personality, of which experience the waking consciousness never has had knowledge.

9. Impressions on the sense organ which never entered consciousness (and were therefore never known or remembered) may afterward appear as visions.

Three Cases of Congenital Deficiency of Both Patellæ in Related Individuals.—In our issue for February 18th we quoted a case of congenital deficiency of both clavicles. Dr. Maurice G. Pearson (*Lancet*, January 28th) now records three cases of colored children which illustrate different degrees of deficiency of the patellæ and are interesting as showing the extent to which growth is an element in its cure. The first two are the only children of one father, while the third is the child of his brother and has several brothers and sisters whose patellæ are natural. *Case 1:* In this patient, a girl, aged five months, there is a very noticeable transverse groove in the position of each patella, and the finger can be pressed in deeply between the condyles of the femur; the patella itself can be felt as a nodule about a third of an inch in diameter; the quadriceps tendon and ligamentum patellæ are narrow, cordlike bands. Although, of course, the child is as yet unable to walk, she can extend her knee quite well. The movements and limits of movements are natural. *Case 2:* A sister of the above, aged four years, has now patellæ which are only slightly smaller than the average. The interesting point about her is the fact that her mother says her knees were as an infant exactly like her sister's, that she was very long in learning to walk, and that even now she can not walk for long, and is "shaky on her legs." *Case 3:* A cousin of the others, aged seven months. This girl also has very small patellæ, but not so small as Case 1. She has also the transverse groove less well marked. Unfortunately, the author was not within reach of any skiagraph apparatus.

How to Induce Local Anæsthesia by Cataphoresis of Cocaine.—Dr. H. Lewis Jones (*Clinical Journal*, March 8th) describes this process as a means of local anæsthesia for trivial operations as follows: "Dr. Morton, of New York, who has recently brought out an admirable book upon the whole subject of the introduction of drugs through the skin by electrical means, has published a formula for a solution of cocaine in guaiacal with which it is much easier to produce a local anæsthesia than it has been hitherto with watery solutions. The solution he recommends consists of cocaine (the alkaloid, not the hydrochlorate), six grains, dissolved in a drachm of guaiacal. If a little of this mixture upon a piece of blotting paper is placed on the skin, and a current applied through it, the cocaine quickly penetrates, and an anæsthesia sufficient for the purposes which I have indicated can be produced in about four or five minutes. The positive electrode should be placed on the blotting paper. It should consist of a

flat disc of bare metal of suitable size. A platinum surface is the best, but tin or any other metal which does not easily become corroded will do almost as well. Care must be taken that the metal itself does not touch the skin at any point. The current is then turned on until it reaches about four milliamperes for an electrode half an inch in diameter. At first from ten to fifteen cells are necessary to produce this current, for the solution has a high resistance; but soon conduction improves, and the number of cells may be reduced. A slight pricking pain is felt during the first minute of the application, but this gradually passes off, and its disappearance indicates that the drug is commencing to act. It is not necessary to prolong the action more than four or five minutes, nor should the current much exceed four or five milliamperes for the above-mentioned size of anode, because the solution itself is slightly caustic, and may produce a superficial irritation if applied for too long a time. The blotting paper being removed, and the part wiped with a tuft of cotton wool, the operation may be commenced. Common sensation may not be entirely done away with, but the perception of pain is so nearly abolished that the patient will bear the introduction of a needle with calmness."

The Mode of rising from the Sitting Posture as a Diagnostic Aid.—Bédart (*Echo médical du Nord*, December 11, 1898) concludes a careful observation (accompanied by schematic representations) on this subject as follows: 1. There are two series of characteristic attitudes adopted in rising by the patient of sciatica and the patient of lumbago or other lesion of the lumbar region—*e. g.*, vertebral caries, contusion, etc., respectively. 2. These objective signs are of some importance in certain cases, especially in simulation, of lumbar troubles and sciatica. In lumbar diseases the patient, when seated on the ground and told to rise, takes his point of support from the hands placed on the ground toward the point, so as to attain the intermediate position "on all fours," as is the case in pseudo-hypertrophic paralysis. In sciatica, on the other hand, the patient takes his support from the hands placed on the ground behind the body and passes therefrom through a squatting posture toward the erect position. Before applying this test, it is advised that the arms of the patient should be crossed and the thighs extended parallel to each other.

The Effects of Oophorectomy on the Female Organism.—A. Pfeifer (*Münchener medicinische Wochenschrift*, 1898, p. 1619; *Gazette hebdomadaire de médecine et de chirurgie*, March 5th) reports that a hundred and sixteen women who had been subjected to oophorectomy were examined with a view to ascertain the effects upon menstruation, sexual desire, alteration of the genital organs, the general health, the nervous system, the psychical condition, and also the therapeutic effects with the following results: The operation was followed by the menopause in 91.8 per cent.; sexual desire—that is, the enjoyment of the sexual act—remained in twenty-six cases (22.6 per cent.), was diminished in thirty cases (24.4 per cent.), and extinguished in forty-three cases (52 per cent.). The uterus regularly atrophied, while the vagina and vulva were only rarely affected. Hysteria was a frequent result, as also was a tendency to obesity. The voice often remained disagreeable, at least for some time after the operation. The therapeutic results had been particularly satisfactory. The essential troubles had disappeared in eighty-seven cases, in eighteen cases they were sensibly ameliorated, and in

six others less so. The operation was specially successful in myoma and in dysmenorrhœa.

Removal of an Ovarian Tumor during the Acute Stage of Typhoid Fever.—Dr. E. W. Cushing (*Annals of Gynecology and Pædiatry*, March) records the following very interesting case of a girl eleven years and ten months of age who had always been healthy; she had never menstruated. For a year before the time of operation she had been nauseated nearly every day, mostly at noon, the attacks of nausea not lasting long. For three months previous to operation she had had feelings of weakness and faintness at intervals, such attacks usually coming on in the afternoon. During six months before operation the mother had noticed enlargement of the abdomen, slight at first, subsequently growing rapidly.

Two weeks before this patient was taken sick, her sister in the same house was seized with severe typhoid fever, with all its well-known and pathognomonic symptoms. This patient began to droop on Tuesday, April 12, 1893. She did not take to her bed until Friday, when she became violently ill, with temperature running to over 105° F. in the evening.

As the abdominal swelling was great and the respiration was very much impeded by it, Dr. Cushing was sent for by the physicians in attendance on the same day in the hope that surgical measures would afford some relief, perhaps by tapping. Examination of the patient showed an ovarian tumor, round, smooth, movable, and fluctuating, which led Dr. Cushing to attribute the high temperature to typhoid fever, inasmuch as her sister was already infected with that disease. At any rate, he preferred opening the abdomen to puncturing without knowing what he had to deal with.

The operation took place on Monday, the seventh day after the first signs of indisposition, and the third since she had been in bed. Rose spots could be detected pretty clearly. The whole abdomen was filled with a fluctuating mass. Temperature, 101° F. Breathing very shallow and difficult. Incision revealed a clear, shining cyst wall, which was punctured and the fluid evacuated. There were no adhesions. The other ovary also showing signs of cystic degeneration, was removed. The operation was particularly easy and correspondingly rapid. It was a peculiar sensation to put the hand into an abdomen at a temperature over 101° F. It felt actually hot. Dr. Cushing examined the small intestines carefully to see whether any disease of Peyer's patches could be detected by sight or touch, thinking that the opportunity in the living subject would not often occur, but no abnormalities could be found in the intestines.

The patient recovered nicely from the operation, but had a long and hard struggle with the fever. The oppression of breathing was relieved at once. There were thirteen hæmorrhages from the intestine, on the second day thirteen days after the operation. It seemed as if she would hardly recover, but youth and good care finally brought her through, although she was ill for over three months. She lost all her hair, and went through a perfect wreck. There was at no time any suppuration of the abdominal wound.

The young lady finally made a most perfect convalescence, and has developed into a handsome, active, intelligent physical and mental vigor, and is now nearly eighteen years old. As it is not often that the ovaries are removed before puberty, Dr. Cushing adds, it may

be interesting to state that in no respect whatever does this girl seem, or, so far as can be ascertained in such a delicate matter by her mother, does she feel, at all different from other girls of her age.

Sarcoma of Both Ovaries.—Mr. Alban Doran (*Transactions of the Obstetrical Society of London* for October, November, and December, 1898) recently showed to the society two sarcomatous ovaries removed from a woman forty-five years of age who had been five times pregnant. Her last pregnancy had ended in an abortion at the third month, in June, 1898. A swelling was then felt above the pubes, and increased very rapidly. The periods remained regular, though the show was never free. Two lobulated tumors filled the abdomen from the pubes to two inches above the umbilicus. They felt very elastic, and anteriorly was a cystic projection simulating a dilated bladder, but the catheter only passed four inches and not near the cyst. The cervix was high, and the left tumor came down behind it in Douglas's pouch. The uterine cavity measured three inches and a half. The two tumors and the uterus moved together, but were not very movable. Taken as a whole, Mr. Doran thought that the tumors were uterine. At the operation some deep-red ascitic fluid escaped, and then on drawing out the right tumor he found that it was attached by a short but anatomically normal ovarian pedicle to the right side of the uterus. There were intimate and very vascular adhesions to the small intestines. The left tumor was more solid than the right, and its pedicle was anatomically normal, but with extremely dilated vessels. Neither pedicle seemed infected with the new growth, but both were short. The two tumors weighed five pounds fifteen ounces, and looked like myxo-sarcomatous growths. On section they appeared reddish brown and gelatinous like a kidney, or still more like a polished red pebble. The patient recovered, and was in good health on January 2, 1899.

Mr. Doran has seen a large number of these doubtful solid and semi-solid tumors. As a rule, he says, diagnosis is not attended with difficulty, but lobulated soft solid ovarian growths with short pedicles can not always be distinguished from multiple uterine fibroids without the aid of an exploratory incision. Clinical and physical symptoms are very misleading. He dwells on the question of incision because he considers it the right step. Waiting may result in a correct diagnosis, but should the tumor prove to be an ovarian sarcoma the patient will be clearly exposed to increased risk by such delay.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of December 7, 1898.

The President, Dr. S. ALEXANDER, in the Chair.

(Continued from page 506.)

Intra-uterine Vaporization.—Dr. A. BROTHMAN read a paper on this subject, and exhibited the apparatus used in conducting the treatment.

Dr. W. J. CUNNINGHAM, of St. Louis, said that mention had been made in the paper of obliterating

the uterine cavity as a cure for salpingitis. He thought if the ovaries were left *in situ* it might be unwise to completely close the canal.

Dr. BROTHERS said that many operators, when they found bilateral disease of the annexa, made it a rule to remove the uterus at the same time, on the plea that the uterus being diseased is apt to give rise to subsequent symptoms. If the canal of the catarrhal uterus could be obliterated, then the only reason for removing the uterus in such cases would be removed. He had not intended to say that this procedure was a cure for salpingitis.

Mistakes I have made in the Diagnosis of Appendicitis.—Dr. ROBERT T. MORRIS read a paper with such a title. (See page 469.)

Dr. JOSEPH D. BRYANT said that any one who operated for appendicitis was very liable to be mistaken in the diagnosis. He recalled the case of a young and well-nourished lady, of hysterical temperament. She had come under his charge two years ago. Careful examination had shown the presence of a small tumor, associated with deep tenderness and fever. He had agreed in the diagnosis of appendicitis made by her family physician, but she had declined operation. She had returned six months later with the same condition, and he had operated. Not only had there been no appendicitis, but she absolutely had no appendix. That she was hysterical had been recognized, but the point of tenderness was found to be a glandular growth located posterior to the usual site of the appendix. As the patient had been told that the appendix had been removed, she had recovered promptly, and had had no further trouble of this kind. Another case was cited to bring up the question of diagnosis in connection not only with hysteria but with alcoholism. About eighteen months ago he had seen in Bellevue Hospital a man of middle age suffering severely from the effects of a debauch. There was deep tenderness over the region of the appendix, although he asserted that the appendix had been already removed by a competent surgeon in this city. Three or four months afterward he said that he had had another attack, coming on as had the first one, after excessive drinking. He had then been operated upon in another hospital, and had been informed that "a piece of diseased tissue had been removed." When seen at the Bellevue Hospital, he had been suffering from a third attack. There had seemed to be more than the usual tenderness, so that Dr. Bryant said he had been suspicious that hysteria was the underlying condition from the beginning. He had subsequently learned from the surgeon of a Brooklyn hospital that the man had been in that hospital suffering from the effects of a debauch, and also symptoms of appendicitis. Dr. Bryant then spoke of finding fibrinous peritonitis with malignant disease of the caecum. In the first case of this kind that he could recall, a part of the ileum had been excised by an eminent surgeon, and the patient had recovered. The subsequent examination of the specimen had revealed a diseased appendix and a large amount of surrounding lymph which had been mistaken for a sarcoma. Two years ago he had seen a patient with a very large tumor in the ileo-caecal region. Believing that the patient was suffering from appendicitis, another surgeon had made a free incision. A mass had been disclosed which was thought to be a sarcoma, and accordingly the wound had been closed. Two or three months later the case had come under Dr. Bryant's care. The history stated

that after the primary operation most of the induration had disappeared, but that it had subsequently returned. A free incision into this large mass of lymph had disclosed an appendix, about four inches long, containing no foreign material, but the wall was thickened. Microscopical examination by Dr. Dunham showed that this was the result of chronic inflammation. The speaker said that it not infrequently happened that one had another attack of appendicitis after one appendix had been removed, or was said to have been extirpated.

Dr. PARKER SYMS said that while a typical case of appendicitis was easy to diagnose, one should not lose sight of the fact that cases of fulminating appendicitis seen before the signs of peritonitis had developed might be easily looked upon as those in which the diagnosis of appendicitis had been erroneous. Certainly there was often a brief period of quiescence before general sepsis sets in. These cases often presented no evidences of their gravity until serious mischief had been done. He had frequently operated in cases of appendicitis in the interval, but never under such circumstances assumed the responsibility for the diagnosis, as it must necessarily depend upon the previous history entirely. So far it had been his good fortune not to have operated upon a normal appendix. He had removed appendices in the interval which had presented externally nothing unusual except slight congestion, but further examination had shown more or less obliteration or a more or less active catarrhal process going on within the appendix. For this reason it was sometimes more difficult to make the diagnosis of appendicitis after making the incision than before beginning the operation. In two instances he had met with large masses of lymph resembling a neoplasm, but had proved the true nature of the condition by exposing the mass thoroughly and removing the imbedded appendix. In one case, thought to be periappendicular abscess, seen about the tenth day of the attack, the operation had disclosed a fixed kidney. He was unable to account for the subjective symptoms.

Dr. N. E. BRILL congratulated Dr. Morris on his exceptional good fortune in not meeting many cases of appendicitis in which the diagnosis was in doubt. He had a rarer good fortune than most clinicians who, though more accustomed to abdominal palpation, meet the most of the cases of appendicitis before the surgeon, and yet are often disturbed by a difficulty in coming to an absolute diagnosis. He could say that, so far as his experience went, the mistakes which he had encountered had been made chiefly by prominent surgeons. Two cases which were instructive he could recall at the spur of the moment. The first case which he would mention was diagnosed as an appendicitis. When it came to operation it was found that the right iliac fossa was occupied by a dense, large mass which proved to be a tuberculous omentum which had become twisted by adhesions. The other case was one giving a history of prolonged diarrhea at first, followed some time afterward by severe pain in the right iliac region, and accompanied by a mass which extended upward toward the liver. The pre-operative diagnosis had been an appendicitis with pus burrowing upward. The operation, however, disclosed an empyema of the gall bladder.

It seemed to him that while Dr. Morris was very fortunate in making but seven errors in two hundred and eight consecutive cases, he might have diminished his errors by two, for in the two cases which Dr. Mor-

ris related, one of measles and one of typhoid fever. The mistake might have been avoided. In the case of measles, inflammation of the serous membranes was not a very uncommon complication or sequela, and the peritonitis in that case might have been recognized by Dr. Morris as such a feature. As to the typhoid-fever case, the clinical history and the presence of the Widal reaction would have been sufficient. However, such a thing as typhoid ulceration of the appendix was not so rare as to escape diagnosis.

Dr. A. B. JOHNSON thought it was a cause for congratulation that Dr. Morris had made so few errors in diagnosis; certainly he had himself made more. He had personally failed to make the diagnosis of appendicitis during the first twelve or eighteen hours of the disease on account of the absence of any tenderness in the right iliac fossa. The mistake was perhaps less likely to be made by the surgeon than by the physician. In another case he had made a mistake in judgment. The patient was a young man who had presented the characteristic symptoms of appendicitis for one week. He was apparently getting better at the first examination—the temperature was not over 99.5° F., and the pulse was not rapid, although he looked ill, and there was some yellowness of the conjunctiva. Operative interference had been accordingly postponed for a few days, but owing to the persistence of the temperature operation was performed. It disclosed a small encysted abscess communicating with a gangrenous appendix. The wound did well, but the man became more and more yellow, developed ascites, and died of a septic phlebitis. He had heard of a few similar cases in which it was probable that an earlier operation might have saved life. He had operated for supposed appendicitis, and had found an inflamed gall bladder. Just before this he had operated in a case in which the appendix had been situated very high up. The gall bladder in the second case was found to be inflamed, and full of stones and pus. However, the patient had made a good recovery. Two days ago he had made a mistake in the case of a woman giving a history of a tumor in the lower part of the right side of the abdomen for four or five years. There were symptoms pointing to acute appendicitis. The extreme tenderness prevented a searching examination. On the right side of the vagina was an elastic swelling which seemed to correspond with the tumor referred to. The tumor in the iliac fossa was tympanitic. On making an incision it was found that there was a very large abscess full of pus and gas. The appendix had already sloughed away. Three times he had operated for supposed appendicitis and had found peritonitis, due to pus tubes in two cases, and to gangrene from twisting of the tube in a third case. He agreed with Dr. Syms that the external appearance of the appendix was often misleading. A few days ago, in a case of very short duration, the appendix did not seem to be even congested, but after its removal examination showed that perforation at one point was imminent. Dr. Johnson also spoke of a rather puzzling class of cases in which a long appendix extended across the abdomen, and the signs were located on the left side. He had operated in two such cases in the past fortnight. In one of them the signs had been entirely on the left side, and the abscess had also been on that side. An incision having been made to the left of the median line, it had become necessary to make another on the right side to remove the appendix, which was about five inches

long. In the other case, the signs had also been entirely upon the left side, and there had been a decided difference of opinion among the surgeons who had seen the case, particularly as there had been a large mass on the left side. The operation had revealed a large mass of intestines glued together by lymph. On the other side there was a long appendix perforated at its tip, and communicating with an abscess a little to the left of the median line. It was a question whether the median incision should be used in these cases or an incision made first on one side and then on the other.

Dr. CHANDLER asked whether the presence of fever was necessary to diagnose appendicitis. He would also like to know the differential diagnosis between colitis and appendicitis, and if, in the absence of fever and including any disease of the abdominal walls, pain located only at "McBurney's point" should be considered an indication of the existence of appendicitis.

Dr. ALEXANDER asked regarding the case in which the appendix had been found adherent to the ovary, whether the adhesions had resulted from disease in the ovary or in the appendix. In illustration of the mistakes in diagnosis he recalled the case of a lady from whom he had removed a calculus located in the ureter. In her case a diagnosis of appendicitis had been made by three different surgeons outside of New York city. She had hydronephrosis, which required a nephrotomy and the removal of the stone from the ureter. This operation had only partly relieved her of her pain. Subsequently another surgeon had removed her appendix, and she had since then been entirely well.

Dr. MORRIS said that in most of the cases in which there were large masses of lymph exudation there had been a mucous inclusion and infection, the lymph being there for the purpose of guarding against further infection. Sometimes an appendix would be bent in such a way that one part would be firmly adherent to the cæcum and another part be free. He had recently operated in such a case in which the adherent part of the appendix was three inches long, and contained a very large concretions. A surgeon had previously operated upon this patient, and his testimony had been corroborated by several witnesses, that he had removed a gangrenous appendix, four inches long, and that it had contained two concretions. At the time the speaker had operated there had been three inches of the appendix imbedded in very dense adhesions. It was probable, therefore, that four inches of free appendix had been cut off at the first operation, and that several inches of adherent appendix had been overlooked at that time. It was the latter which had been extirpated at the second operation. Regarding the interval cases, Dr. Morris said that he did not operate unless there was distinct evidence, on palpation, that the appendix was infected. It was not difficult to learn to palpate inflamed appendices in the interval, or even to palpate normal appendices. In many of these cases, one or two concretions could often be made out in the interval. Where the appendix looked normal, and yet there was a distinct history of an acute attack, and internal tenderness on palpation, there was sufficient justification often for operation. Allusion had been made to cases in which the only abnormal appearance of the appendix is a dilatation of the vessels on the outside; this, he thought, was an anatomical peculiarity only. On examining the adjacent bowel and mesentery it would be found that these dilated vessels were present there also. As to the error in diagnosis in the case following typhoid fever, it

should be said that the typhoid fever had not been typical, and the presence of another eruption had made it more than usually difficult to establish the diagnosis. A gall bladder distended with stones not infrequently occupied the region of the appendix, as did also the kidney, but in all that he had seen the gall bladder and the kidney had been movable, enabling a correct diagnosis to be made. In the left-sided cases he had usually made a short incision, first on the left and then on the right side. Robinson, of Chicago, had shown how the psoas muscle sometimes caused traumatism of the sigmoid, giving rise to an inflammation of this portion of the bowel. The case of adherent tube and appendix was, in all probability, one of salpingitis, the disease having involved the appendix. In answer to Dr. Chandler, he would say that at the outset of an appendicitis there was apt to be a mixed infection, and this was usually associated with a temperature of from 101° to 104° F., but very soon the colon bacillus obtained supremacy, and its toxins did not usually cause much fever—a typical colon-bacillus temperature was from 99° to 101° F. Of course, if the other bacilli continued to be active, the temperature would be quite high. The temperature was really of no consequence in aiding one in making the diagnosis of appendicitis. The differential diagnosis between colitis and appendicitis he made entirely by palpation. Pain at McBurney's point was not sufficient for a diagnosis; there must be also collateral testimony, such as the evidence furnished by palpation.

Miscellany.

The Medical Hero of Santiago.—Under this heading the *British Medical Journal* for March 18th has the following appreciative account of our doctor general:

"General Leonard Wood, the hero of Santiago, began his career as a member of the medical profession, and the work of sanitary regeneration which he has begun in Cuba has doubtless been inspired and directed by his medical training. Governor Roosevelt has contributed to the *Outlook* an interesting sketch of his early career. General Wood, he says, was a Cape Cod boy, and to this day there are few amusements which he enjoys more than for himself to sail a small boat off the New England coast, especially in rough weather. He went through the Harvard Medical School in 1881-'82, and began to practise in Boston, but his was one of those natures which, especially when young, fret for adventure. A year after leaving college he joined the army as a contract surgeon, and almost immediately began his service under General Miles in the southwestern territories. These were then harried by the terrible Apaches; and the army was entering on the final campaigns for the overthrow of Geronimo and his fellow renegades. No one who has not lived in the West can appreciate the incredible fatigue and hardship attendant upon the campaigns. There was not much fighting, but what there was of an exceedingly dangerous type; and the severity of the marches through the waterless mountains of Arizona, New Mexico, and the northern regions of Old Mexico (whither the Apache bands finally retreated), was such that only men of iron could stand them. But the young contract doctor, tall, broad-

chested, with his light yellow hair and blue eyes, soon showed the stuff of which he was made. Hardly any of the whites, either soldiers or frontiersmen, could last with him, and the friendly Indian trailers themselves could not wear him down. In such campaigns it soon became essential to push forward the one actually fitted for command, whatever his accidental position might be; and Wood, though only a contract surgeon, finished his career against the Apaches by serving as commanding officer of certain of the detachments sent out to perform peculiarly arduous and dangerous duty; and he did his work so well, and showed such conspicuous gallantry, that he won the most coveted of military distinctions—the medal of honor. Wood never called upon others to do anything that he himself did not do. They ran norisk that he did not run; they endured no hardship which he did not endure—intolerable fatigue, intolerable thirst, never-satisfied hunger, and the strain of unending watchfulness against the most cruel and dangerous of foes—through all this Wood led his men until the final hour of signal success. When he ended the campaigns he had won the high regard of his superior officers not merely for courage and endurance, but for judgment and entire trustworthiness. Of General Wood's brilliant services in Cuba this is not the place to speak; they are writ large in the recent history of his country."

Prohibition of Testimony by Physicians.—The *Medical News* for March 25th states that on March 13th Governor Roosevelt signed an amendment to the civil code which had passed both houses at Albany. This amendment absolutely prohibits a physician from divulging any information he may have acquired in his professional capacity concerning any patient, either before or after the latter's death. For a long time the insurance law has permitted a physician to testify concerning the physical condition of a policy-holder.

A Traveler from Altruria.—We quote the following from the *American Druggist* for March 25th. While there is undoubtedly some truth in it, we can not help feeling sure that the view taken by the traveler from Altruria is more pessimistic in all respects than the circumstances actually warrant.

"Said a member of an essential oil firm: 'What is the use of making a pure oil of sandal? Nobody wants it. Nobody will buy it. There isn't any market for it in America. You can't induce a wholesale druggist to touch it, and the retailers do not evince the slightest interest in it. What they want is a sophisticated article upon which they can make a great big profit.'

"But what about the physicians?' the traveler asked. 'Surely they demand an oil which will effect a speedy and radical cure!'

"My dear friend!' the essential oil man exclaimed, 'do you imagine you are still living in Altruria? The physicians of that fantastic country possibly may desire to make speedy and radical cures—but, believe me, that kind of physician does not exist in America. What the Yankee doctor desires is something which will be neither radical nor speedy. Do not delude yourself with the notion that physicians in this country are pure and unadulterated philanthropists. Not on your life! They run their little *Schützenfest* for what there is in it—same as I run mine.'

"But," objected the traveler, 'you can not surely mean that you have no other consideration in your busi-

ness than that of immediate profit! I am informed that your house is one of the greatest in the line in America.'

"Oh, as to that!" the essential oil man responded serenely, 'I assure you we are very careful of our reputation. But, as one of the ancient philosophers remarked, "When a citizen of a state exceeds his fellows in virtues, he is no longer a citizen of that state." Mark Twain boiled that idea down into, "Be good and you'll be lonesome." Sabby?'

"Which I must take to mean," said the traveler sadly, 'that the essential oil business is carried on upon lines of exceeding shadiness.'

"Essential oil houses, my interesting friend, supply the wholesale druggist with that which he demands. The wholesaler gives the retailer what he asks for. The retailer is equally complaisant with the physician. You must start the reform with the doctor. Then, as the nursery rhyme has it, the stick will beat the dog, the dog will worry the pig, the pig will cross the stile, and so the old woman will get back to Altruria to-night, all right. Call again; I find your Altrurian point of view quite entertaining."

The Prevalence of Leprosy in the United States.—Dr. Prince A. Morrow, of No. 66 West Fortieth Street, is desirous of obtaining complete statistics of leprosy in this country, to be incorporated in a report on the subject. He respectfully requests any physician who has personal knowledge of a case or cases to communicate the facts to him within thirty days. Such information will be duly credited, and, if desired, the name and any circumstances which might lead to the identification of the leper will be regarded as strictly confidential.

The New York Academy of Medicine.—At the last regular meeting, on Thursday evening, the 6th inst., the following papers were presented in a discussion on malaria: Researches of the Etiology of the Texas Cattle Fever, and its Bearing upon Malaria, by Dr. Theobald Smith, of Harvard University; The Present Status of the Inoculation Theory of Malaria, by Dr. Walter B. James; and African Black-Water Fever, by Dr. F. P. Lynch, late of the Congo Free State.

At the next regular meeting, on Thursday evening, the 20th inst., in the continuation of the discussion on malaria, the following papers will be read: The Morphology of the Malarial Organism, by Dr. James Ewing; Malarial Nephritis, by Dr. W. S. Thayer, of Johns Hopkins University; and Some of the Less Common Effects of Malaria, with Remarks upon the Treatment of Chronic Infection, by the president of the academy, Dr. William H. Thomson.

At the next meeting of the Section in Surgery, on Monday evening, the 10th inst., Dr. Robert Abbe will report a case of anastomosis of Stenson's duct, and Dr. John B. Walker will report one of epithelioma of the lip in a woman. The following papers will also be read: General Prognosis in the Injuries of the Spinal Cord, by Dr. P. R. Bolton; and Fortifying the Inguinal Canal with Silver Wire in the Operation for Hernia, by Dr. A. M. Phelps.

At the next meeting of the Section in Genito-urinary Surgery, on Tuesday evening, the 11th inst., Dr. Paul Thorndike, of Boston, will read a paper on The Diagnosis and Treatment of Rupture of the Bladder; Dr. Edward L. Keyes, Jr., will present a modified conical

steel sound; and Dr. Ferd. C. Valentine will exhibit a simplified cystoscope. Patients will be presented and specimens will be exhibited.

At the next meeting of the Section in Pædiatrics, on Thursday evening, the 13th inst., the following papers will be read: A Series of Cases of Goitre in Children, including Examples of Cretinism, Basedow's Disease—Tachycardia, by Dr. Charles Hermann; A Case of Intussusception, by Dr. William P. Northrup; A Case of Abscess of the Lung following Pneumonia; Resection of Ribs; Recovery, by Dr. B. Van D. Hedges; Crescent Malaria, by Dr. Henry Heiman; and Enlarged Liver and Spleen in Infancy, by Dr. W. N. Berkeley.

Appointment to State Board of Health.—We learn from the *Medical News* for April 1st that Governor Roosevelt has appointed Professor Walter Francis Wilcox, of Cornell University, a member of the State board of health.

The Teaching of Tropical Medicine.—The *Journal of Tropical Medicine*, of London, announces in its March number that lectureships on tropical medicine are to be instituted in the University of Aberdeen and Edinburgh University.

Traction for the Relief of Pain.—At a meeting of the Section in Orthopaedic Surgery of the New York Academy of Medicine held on February 15th Dr. T. H. Myers related the case of a man, twenty-six years old, who had suffered for five years and a half with rheumatism in the ankles, the neck, the shoulders, the elbows, the wrists, and the right hip. The movements in the affected hip had become much restricted. A short traction splint was applied, and the man had had no pain since last June. Dr. S. Ketch recalled a case in which pain due to a sarcoma of the femur had failed to be relieved by powerful narcotics, but had yielded for a time to traction.

A New Chicago Journal.—The second (March) number of a new bimonthly, the *Western Clinical Recorder*, edited by Dr. F. Jenner Hodges and Dr. William T. Rinehart, contains much valuable and readable matter, and is well illustrated. The new journal will doubtless succeed.

The American Medical Association.—Dr. William B. Atkinson, the secretary, announces that the fifteenth annual meeting will be held in Columbus, Ohio, on Tuesday, Wednesday, Thursday, and Friday, June 6th, 7th, 8th, and 9th. The delegates shall receive their appointment from permanently organized State medical societies and such county and district medical societies as are recognized by representation in their respective State societies, and from the medical departments of the army, navy, and Marine Hospital Service of the United States.

Each State, county, and district medical society entitled to representation shall have the privilege of sending to the association one delegate for every ten of its regular resident members and one for every additional fraction of more than half that number; provided, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the code of ethics of the association.

Members by application shall consist of such members of the State, county, and district medical societies entitled to representation in the association as shall

make application in writing to the treasurer, and accompany said application with a certificate of good standing, signed by the president and secretary of the society of which they are members, and the amount of the annual membership fee, five dollars. They shall have their names upon the roll and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

Each delegate or permanent member, when he registers, is requested to record the name of the section, if any, that he will attend, and in which he will cast his vote for section officers.

Secretaries of medical societies, as designated above, are earnestly requested to forward lists of their delegates at once. Also, that the permanent secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the secretaries are, by special resolution, requested to send to him annually a corrected list of the members of their respective societies.

Persons who desire to read papers before the Section in *Materia Medica*, *Pharmacy*, and *Therapeutics* at the Columbus meeting, June 6th to June 9th, are urged to send their names and the titles of their papers at once to the secretary, Dr. Leon L. Solomon, No. 323 West Walnut Street, Louisville, Kentucky, who is now making up the final programme.

The Cornell University Summer Medical Courses.—It is announced that during the coming summer the university will begin its summer medical courses in New York. The courses will last from May 15th to August 1st. They will consist largely of laboratory and clinical work, and will be open to both undergraduates of other schools and graduates, thus constituting a valuable addition to New York's resources in post-graduation instruction. The teaching corps consists of thirty-five instructors, and it strikes us that they have been very judiciously selected.

Small-pox on the Mexican Frontier.—The senseless panic in Laredo is thus described in a letter from Acting Assistant Surgeon Hamilton, of the Marine-Hospital Service, printed in the *San* last Sunday:

"The State health officer took charge and he had to call on United States troops for assistance, as the people would not be moved. The assistant city marshal was wounded on Sunday, March 19th, while trying to keep an ambulance at work, and the ambulance had to stop, as there was too much excitement, and the mob was large and beyond the control of the Texas Rangers and city police. The State health officer needed more force, and one troop of the Tenth United States Cavalry was put at the service of the mayor. On Monday, March 20th, when the ambulance commenced to move out patients, the mob again became uncontrollable and the captain of the State Rangers was wounded, and one of the leaders of the mob was killed and several others were wounded. The troops were called upon and responded at once, cleared the streets, and there has been no disturbance since. Notwithstanding all this trouble, the vaccinating corps, of which I took charge for a thorough house-to-house inspection and vaccination, have had very little opposition. There have been about twelve to fifteen refusals, which had to be reported, arrested, and then vaccinated; otherwise no trouble. There have been over thirteen hundred vaccinated or revaccinated since I commenced, and there would have been more,

only I had my corps stop work when any fighting was going on for fear that some of them might be injured. My force is not large enough, but it is all the city said they could afford at present."

The Medical Society of the State of Tennessee.—The sixty-sixth annual meeting will be held in Nashville, on Tuesday, Wednesday, and Thursday, April 11th, 12th, and 13th, under the presidency of Dr. Thomas H. Marable, of Clarksville. In addition to the president's address, the preliminary programme contains the following titles: The Subcutaneous Rupture of Large Arteries from Contused Wounds, by Dr. Jeremiah A. Crook, of Jackson; Immunity and Susceptibility, by Dr. Isaac A. McSwain, of Paris; Abscess of the Liver, with a Report of Cases, by Dr. Maximilian Goltman, of Memphis; The Hippocratic Oath, by Dr. Andrew M. Trawick, of Nashville; Tubal Pregnancy, with a Report of Cases, by Dr. James M. Black, of Knoxville; The Treatment of Acute Pelvic Inflammation in Women, by Dr. Hamilton R. Coston, of Fayetteville; The Non-operative Treatment of Appendicitis, by Dr. Edgar L. Gleaves, of Nashville; The Fever in the Mountains of Upper East Tennessee, by Dr. Hugh C. Chance, of Tazewell; The Abuse of Quinine in Malarial Hematuria, by Dr. Joseph F. Griffin, of Tiptonville; Vesical Calculus in Women, by Dr. Thomas H. Happel, of Trenton; Typhoid Fever and its Treatment, by Dr. George C. Morris, of Savannah; Choreia, with a Report of a Case complicated by Pregnancy, by Dr. Thomas W. Gallion, of Dandridge; The Treatment of the Effects of Grippe on the Prostate and Bladder of Old Men, by Dr. A. B. Hansard, of Twinville; Melancholia, by Dr. Barton W. Stone, of Nashville; Diphtheria, with a Report of Cases Treated with Antitoxine, by Dr. C. M. Sebastian, of Martin; A Practical Suggestion regarding Amputations of the Foot, by Jeremiah L. Crook, of Jackson; The Duration of Gestation, by Dr. Sidney S. Crockett, of Nashville; The Physiological and Therapeutic Effect of Static Electricity, by Dr. George P. Edwards, of Nashville; Some Interesting Cases in Rectal Surgery, by Dr. A. Bennett Cooke, of Nashville; Four Cases in Abdominal Surgery, by Dr. Thomas J. Crofford, of Memphis; The Medulla as a Speech Centre, by Dr. Walter F. Rochelle, of Jackson; Puerperal Septicæmia, by Dr. James H. Preston, of Humboldt; The Treatment of Pneumonia, by Dr. Robert J. McFall, of Cumberland City; The Treatment of Rheumatism, by Dr. Charles W. Fleenor, of Holston Valley; Chronic Gastritis, by Dr. William C. Bilbro, of Murfreesboro; The Cause, the Nature, and the Treatment of Laryngitis in Singers, by Dr. Richmond McKinney, of Memphis; A Report of an Interesting Case of Eye Disease, by Dr. James L. Minor, of Memphis; Abdominal Pregnancy, with a Report of a Case, by Dr. S. B. Fowler, of Gainesboro; Reports of Cases of Hæmorrhoids, by Dr. John L. Jelks, of Memphis; Sudden Deafness with Aphasia of Eight Months' Duration, by Dr. John T. Herron, of Jackson; Typhoid Fever, by Dr. Joseph R. Puryear, of Wier; The Treatment of Urethral Stricture, by Dr. William F. Glenn, of Nashville; The Motor and Sensory Areas of the Brain and Spinal Cord, and their Physiological Functions, by Dr. David R. Neil, of Lewisburg; A Report of Cases of Appendicitis with Hematoma of the Ovary; and Suprapubic Lithotomy in a Child, by Dr. William D. Sumpter, of Nashville; and a Report of a Unique Case of Gunshot Wound of the Abdomen, by Dr. Rufus B. Fort, of Nashville.

Original Communications.

AN EXTRAORDINARY CASE OF
AORTIC ANEURYSM.*

By CARL BECK, M. D.,
NEW YORK.

THE patient, an architect, aged thirty-nine years, German by birth, single, gives the following family history: Father died suddenly, when sixty-five years of age; mother also died suddenly, when sixty. His only brother died of typhoid fever at twelve. There were no sisters.

The patient denies lues, and the examination verifies his statement. Gout and chronic nephritis, as well as any erotic excesses, are also to be excluded. He was always well until five years ago; then, after lifting an excessively heavy weight, he noticed a small protuberance on the left side of his neck; this grew constantly, invading at last the whole anterior surface of the neck and the upper portion of the chest. It is highly probable that the exertion in lifting caused an enormous increase in the circulatory pressure, followed by an over-extension and probably a laceration of the tunica intima and media. Shortly after this he was admitted to a hospital, where he was treated for torticollis, as he states, for five weeks. During that period slight dysphagia and hoarseness had been present. He recovered again so far as to regard himself well for an entire year. Then a "severe attack of malaria" induced him to seek hospital treatment again. After having improved considerably he left the hospital, and for the last eighteen months, he says, he has been under medical treatment occasionally. I am very much indebted to Dr. J. Glensmann, who examined and treated the patient more than a year ago, for informing me that at that time the tumor had not exceeded the size of a large apple, and that the hoarseness was considerable then. Two months ago the man began to suffer from slight dizziness, with constriction of the throat and chest. Slight dysphagia and hoarseness recurred.

On October 31, 1898, when he entered St. Mary's Hospital, I saw the patient for the first time. The tumor had reached an enormous size, extending over the sternum, the sternal portions of the clavicles, and the whole anterior surface of the neck, the diameter of the latter portion being seven inches and a half (see Fig. 1). The constant pressure of the tumor had caused complete atrophy of the adjoining osseous structures, so that no visible trace was left of the sternum or of the sternal portions of the clavicles.

The examination of the heart, both by percussion and auscultation, revealed hypertrophy of the left ventricle. The apex beat was felt in the sixth intercostal space, one inch laterally from the mamillary line. Above the jugulum and in the right parasternal line diastolic as well as a systolic murmur was noticed, the latter being more distinct at the systole. On placing the hand gently on the thorax, slight vibrations were felt.

The lungs were normal. No cough was present. Sometimes, especially after any muscular exertion, there was dyspnoea. The percussion was dull to the upper

pulse 78; the temperature oscillated between 98° and 98½° F. The pulse of the right radial artery was weaker than that of the left, and lagged behind it appreciably. There were no signs of arteriosclerosis. The voice was clear and its great resonance simply remarkable, and the previously existing hoarseness had undoubtedly been due to pressure paralysis of the recurrent nerve. The dysphagia, undoubtedly caused by the pressure upon the oesophagus, was very moderate on his admission.

The subjective disturbances of the patient were then insignificant. He had a fine appetite, and had attended to his business for the preceding four weeks.



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The pulsation was unusually moderate and compatible with the large size and the hardness of the tumor, and its circumstance pointed to the presence of a benign neoplasia. It must, however, be noted that the tumor is formed by adenoma and the associated tumor is made of connective tissue, and a second possibility is that the tumor could displace a neighboring structure, such as the lumen of the peripheral portion of the ureter, and cause the pain. In these two fortunate cases, the diagnosis is not difficult, as well as the patient's response to treatment (Fig. 1, 2). The surprising explanation

* Case presented to the Section in General Surgery of the National Academy of Medicine, February 1, 1899.



tumor can be obtained by skiagraphy than by percussio. There can be no doubt that the Röntgen rays enable us to recognize aneurysms at their earliest stages, so that frequently a series of prophylactic measures can be taken which may counteract any further aneurysm formation. The therapeutics being under perfect control, it can be ascertained whether under treatment either improvement, arrest, or still further expansion may take place.

The patient has been subjected to Barwell's diet and to gelatin injections after the manner of Lancereaux for the last two months. The injections have been well borne, except on one occasion, when a slight rise of temperature followed and persisted for three days. During that period the patient's general condition was considerably affected. There can be no doubt that the tumor has decreased in size; the hoarseness has disappeared entirely, and the subjective condition of the



FIG. 3.

patient is much improved. It would really seem that the gelatin favors the formation of coagula, absorption taking place by the lymphatic vessels. If the patient improves further, I shall consider galvanopuncture.

As to the technique of the gelatin injections, it may be added that I used five grammes of white gelatin suspended in two hundred cubic centimetres of a sterile 7-to-1,000 chloride of sodium solution. This mixture, after being heated to 98° F., was injected into the connective tissue in the immediate vicinity of the tumor by means of a large Collin's aspiration apparatus at intervals of four days.

Ichthyol in Digestive Disturbances. *Furstenberg's* *Lehrbuch der inneren Medizin*, 1899, N. 1, p. 100. *Gazzetta degli ospedali e delle cliniche*, March 1899, p. 100. She has obtained excellent results from the use of ichthyol in the chronic form of digestive disturbance associated with constipation.

A REMARKABLE CASE OF TERTIARY SYPHILIS.

By ELLIOT JANSON, M. D.

ASTORIA, OREGON.

THE following case is of interest both from a pathological as well as a therapeutical standpoint. It illustrates the ravages of this dreaded disease in neglected cases, and also teaches us what can be done medicinally in an apparently hopeless case.

October 12, 1898, I was called to attend Mrs. K., who had been ailing for some time. On arriving at the house, I found the patient seated in bed, her face partly covered with a cloth, moaning and wringing her hands, as if in great mental and physical distress. On questioning the patient, I elicited the following history: "Age, twenty-seven; American born, but of Irish parentage. Mother died at an early age of consumption; father died as the result of an accident at the age of forty-seven. She had four brothers, all well."

Personal History.—Nine years ago she contracted syphilis from her first husband, after being married a little over a month. She had the typical initial lesion, which healed up readily on treatment. She maintains that at no time had she had any eruption, or mucous patches in her mouth or throat. For five months she kept up antisyphilitic treatment, the attending physician having informed her of the true nature of the disease. At the end of this time, feeling perfectly well, she disregarded the physician's instructions to come back in a few months for a continuation of the treatment.

She received no further treatment until a year and a half ago, when, suffering from an ulcerated sore throat, she deemed it advisable to consult a physician. Realizing the true nature of the disease, he put her on antisyphilitic treatment, which was continued for six months. After this she felt well for about four months, when trouble again began, but, on account of lack of funds, she failed to return for treatment. For the first time she noticed a pimple, surrounded by a red area, forming on the bridge of her nose, followed by a return of the sore throat. The pimple healed slowly for about a week, when the sore throat again returned, it was converted into a small ulcer, which did not heal. This spread slowly, becoming more and more ulcerated. She also had frequent attacks of mucous patches. Her condition remained about the same until about three weeks ago, when the ulcer on the throat again attained the size of a thumb nail. The ulcer then began to spread very rapidly, covering the greater portion

of the nose. In the course of a week the bridge of the nose caved in, the soft parts seeming to melt away, leaving only the tip of the nose intact. Throughout all this time there was very little discharge, but considerable odor was noticed. The throat caused very little inconvenience until a week ago, when swallowing became al-

pendent between them, part of the ethmoidal plate could be seen. On inspection of the floor of the nose, I found a large perforation, of the size of a quarter, involving the soft parts and the hard palate, through which the patient could protrude her tongue at will. On looking into the mouth I found the soft palate entirely destroyed, the



FIG. 1.

most impossible. Severe headache had been constant during the last three weeks, it keeping her awake the greater part of the night. Her appetite was very poor, and she mainly subsisted on liquid food.

Present Condition.—On removal of the cloth from her face the patient presented a pitiable sight. Where the original site of the nose had been, I found a large elliptical-shaped ulcer, which commenced at the junction of the nasal and frontal bones, spreading laterally close to the inner canthus of both eyes, extending downward, involving the cheeks within a quarter of an inch of the malar eminence. Of the nose there was nothing left but the tip, which, from lack of support, fell downward and forward, hanging over the upper lip. The bony framework of the nose was entirely gone; both the



FIG. 3.

posterior pillars of the fauces nearly gone, also extensive ulceration of the whole pharyngeal wall and vault. The accompanying photographs, Figs. 1 and 2, taken before treatment, will give the reader a fair idea of the condition of the patient. She was fairly well nourished, but extremely nervous, and suffering intensely from headache.

Treatment.—Although the case appeared almost hopeless, I gave her all the encouragement I could under the circumstances, and put her on the following treatment: Internally, a saturated solution of potassium iodide, commencing with fifteen drops and increasing two drops every dose, to be taken in milk three times a day. Locally, a twelve-per-cent. ointment of calomel was applied, while a spray of corrosive sublimate (1 to



FIG. 2.

nasal bone and the nasal processes of the superior maxilla were destroyed. Not a vestige of the cartilaginous septum or the vomer was to be found. The inferior and middle turbinated bones were destroyed; the superior turbinated were still intact, but red and swollen. Sus-



FIG. 4.

4,000) was ordered for the throat and interior of the face. Enough morphine to quiet the pains was allowed. In three days the headaches had subsided sufficiently for her to discontinue the morphine. The iodide of potassium was gradually increased until she was tak-

ing seventy-two drops three times a day, when the point of toleration was reached. I was, however, able to continue this dose until the healing was complete. The result of this treatment was nothing short of marvelous. In a few days the discharge diminished, and healthy granulations appeared, which very soon filled up the undermined edges.

On reaching the level of the surface, the cuticle assumed renewed activity, sending out prolongations which soon coalesced, gradually covering the ulcer with a healthy, soft integument. The tip of the nose was carefully adjusted and held in place. In a very short time it became adherent on one side to the margin of the ulcer, partly filling up the opening in the face, thus to a great extent obviating the disfigurement. At the end of five weeks I find the patient in perfect health and in good spirits, doing her own housework. The ulcer has healed completely, leaving an opening at the upper part of the nose, extending down the left side. Photographs 3 and 4, taken at this time, will convey to the reader an idea of her appearance better than words can tell. The throat and fauces are in a perfectly healthy condition, the ulcerated parts being covered by healthy mucous membrane. I kept the patient on full doses of the iodide for three weeks longer, when I gradually reduced the dose to thirty drops three times a day. I then put her on the inunction treatment with mercurial ointment (thirty-three per cent.), still continuing with small doses of the iodide. At the end of two months more I discharged the patient with instructions to come back in three months for another course of treatment.

REPORT OF A NECROPSY IN A CASE OF ACROMEGALY, WITH A CRITICAL REVIEW OF THE RECORDED PATHOLOGIC ANATOMY

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PART I.

By Dr. MITCHELL AND Dr. LE COUNT.

INTRODUCTORY.—The clinical features of the case about to be reported have been fully described by Church and Hensert,* so it is only necessary to recall a few data.

The patient, A. K., was forty-one years of age when he first came under observation in 1893; was 162.5 centimetres in height, and weighed 81.1 kilogrammes. He had apparently been afflicted with the disease for many years, for we learn that while still a young lad, on going to buy a pair of gloves, his hands were found to be unusually large, needing a man's size. Some ten years before this examination he came to this country and began to attract attention on account of his large head and hideous aspect. When first seen, he was under treatment in the county hospital for syphilis, and left after a stay of some length. Nearly two years later, in January, 1895, he was taken sick, and, after staying in a lodging house for a week or so, started to walk to the hospital with a friend's assistance, but fell dead on the

corner of the hospital grounds. The necropsy, twenty-four hours' post mortem, showed death to be due to lobar pneumonia; the cranium and bones of the extremities on one side were dissected out and macerated.

Necropsy Report.—The brain appears normal except for an injection of the meningeal vessels. The hypophysis is very much softened, and removed only with considerable difficulty from the fossa, which is much enlarged. It consists of a semiliquid mass of grayish-red tissue, which does not seem to be greater in bulk than the normal hypophysis.

The thyroid weighs seventy grammes; the left lobe measures $6.8 \times 3.1 \times 2.5$ centimetres; the right, $7.5 \times 4.3 \times 2.5$ centimetres. On section it appears normal. No thymus gland or remains of thymus are found.

The left pleural cavity is empty and free from adhesions. The left contains a small amount of sanguinolent serum.

Lungs: The right lung weighs 560 grammes; it measures $25 \times 18.7 \times 10$ centimetres. There are many spots of black pigment in the pleura. The lung floats and crepitates throughout; the anterior and lower borders of the lower lobe are emphysematous; there are no changes about the apex. On section, a small nodular area is found in the lower external portion of the upper lobe which contains a cavity 1.5 centimetre in diameter, filled with grayish pus. The surrounding lung tissue is consolidated to a slight extent; the remainder of the lung shows no areas of consolidation, but appears engorged with blood. The left lung weighs 1,330 grammes; it measures $26.2 \times 23.6 \times 8.7$ centimetres. The pleura over the upper lobe is covered with a soft fibrinous exudate, easily removed. This lobe is massive and firm, and on section shows a gray, granular surface from which casts of the alveoli and small bronchioles are easily scraped; portions of this lobe sink at once when placed in water. A distinctly mucopurulent material escapes from the larger air-passages on pressure. The auricular part of the upper lobe, the anterior margin, and extreme apex consist of much-dilated air sacs, easily collapsed by pressure. The lower lobe contains but little air, much fluid, and some areas of consolidation in its centre.

The pericardial cavity contains a small amount of clear fluid; its surfaces are smooth and of an even color throughout.

Heart: Unopened it weighs 450 grammes. There is a thick deposit of fat over the base of the heart, measuring from five to seven millimetres in thickness. The mitral valve admits two finger tips; the tricuspid, five. The cavity of the left ventricle measures eight centimetres long; its wall, 2.8 centimetres; the cavity of the right ventricle, 8.7 centimetres; the wall, 6 to 9 millimetres. The left ventricle is empty; the right ventricle and auricle contain a small amount of "goose-fat" clots. The endocardium in the left ventricle shows a few yellowish thickenings just below the aortic valves for a distance of one to two centimetres. The cord tendons are shortened and the muscular bands thickened in the left ventricle, some of them extending over two centimetres in length. The mitral valve is slightly thickened at its free edge. The pulmonary and pulmonary valves show no changes. The coronary and auricular appendages appear normal. The aortic valve is closed. The aortic valve and coronary arteries at their points of contact and attachment to the ventricle are of a firm consistence throughout, and of a brown color, and shows on close examination a few small white thread-

* Medical Record, May 6, 1894.

like streaks which run parallel with the muscular fibres and appear located, as a rule, around the blood-vessels.

The coronary orifices are open. Both coronary arteries are very much dilated and tortuous. The right is found with its lumen empty to the apex of the heart. The left measures thirteen millimetres in diameter three

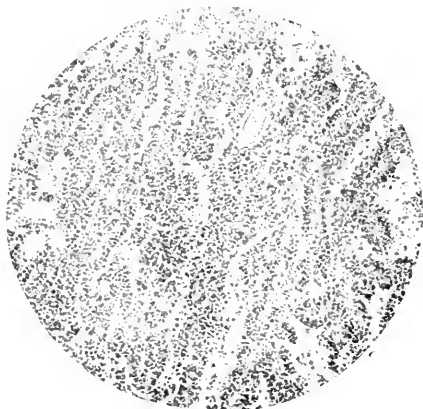


FIG. 1.—Section of hypophysis. $\times 75$.

centimetres from its opening into the aorta, and contains a few atheromatous plaques in its wall—most numerous near the aorta.

Aorta: Just above the valves are many scalelike plaques, completely calcified, which readily shell out, also other yellowish areas which show no signs of calcification. In the thoracic aorta many similar calcified plates are met with, as well as grayish and yellowish raised areas. Some of the areas of calcification measure a centimetre across.

The diaphragm extends upward to the fourth rib on the right side and to the fourth interspace on the left side.

The abdominal cavity contains only a slight amount of fluid. The peritoneum is smooth and shiny everywhere. There are no adhesions except a few about the gall bladder and hepatic flexure of the colon. The omentum covers the intestines only in part, reaching a point opposite the umbilicus.

The stomach weighs two hundred and eighty-five grammes. It measures $26.2 \times 11.2 \times 7.5$ centimetres. The pylorus admits one finger easily. The mucosa appears to be thickened, and is covered with considerable grayish-brown mucus. It is thrown into many folds, which generally conform to the rugae in direction; these folds are almost entirely obliterated by stretching.

In the intestines the solitary follicles and Peyer's patches are found enlarged and considerably bile-stained. Considerable mucus, exceedingly viscid, adheres to the mucous membrane of the small intestine. The mesenteric glands are considerably enlarged and contain pin-point ecchymoses. The appendix, short and thick (four centimetres long), lies on the right ilio-pectinal line.

Liver: The weight is 3,550 grammes. It measures $29.3 \times 29 \times 13.7 \times 11.8 \times 8.7$ centimetres. Externally, midway between the superior and inferior borders, it presents a groove extending transversely from the fis-

sure between the right and left lobes to the right border; this constriction marks off about one fifth of the right lobe. The fissure between the right and left lobes is much exaggerated, being about 6.2 centimetres in depth. The surface of the liver is irregularly nodular, the elevations measuring 0.5 to one centimetre in diameter. Between these elevations are bands of white connective tissue in the capsule. The surface of the cut section is rough; the islands of liver tissue which project as elevations measure from one to five millimetres across. In consistence it is firmer than normal; in color, a uniform grayish red. The gall bladder is empty and the bile passages are patent.

Spleen: The weight is 450 grammes, and it measures $18.7 \times 10 \times 5$ centimetres. The capsule is wrinkled and the pulp softer than normal; the Malpighian bodies are faintly visible; the connective tissue is not increased. A few small, whitish areas in the capsule occur, at which points the capsule is thickened.

The pancreas weighs 105 grammes, and measures $23.7 \times 3.7 \times 1.2$ centimetres. On section no changes from the normal are visible.

The adrenals appear normal; the left weighs 20 grammes, the right sixteen grammes. The left measures $7.5 \times 4.3 \times 1.2$ centimetres; the right measures $5 \times 4.3 \times 1.2$ centimetres.

Kidneys: The left weighs 300 grammes; it measures $15 \times 6.8 \times 5$ centimetres. Externally are many depressed areas, 0.5 to a centimetre in diameter and depressed below the surface one to two millimetres. There are also many small subcapsular cysts possessing clear contents, averaging one millimetre across. About thirty of these are found on one side of the kidney. On section the cortex and pyramids appear of the same shade of color, the cortical markings distinct, labyrinth wider than normal, the line between pyramid and cortex indistinct. The cortex measures 1 to 1.5 centimetre; the pyramid, 2 to 3 centimetres. There is an excess of fat in the pelvis, and the capsule is quite adherent. The right

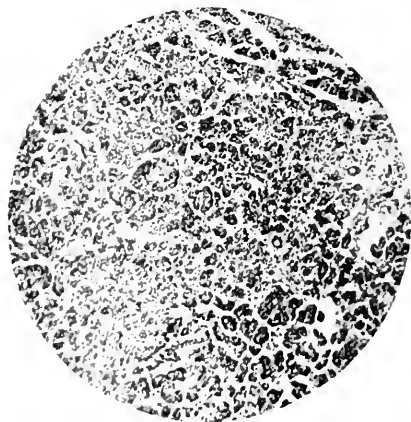


FIG. 2.—Section from pancreas. $\times 75$.

kidney weighs 360 grammes and measures $15 \times 8.4 \times 3.7$ centimetres. It answers to the same description as the left kidney.

The other organs were negative.

Anatomical Diagnosis.—Lobar pneumonia, fibrinous pleuritis, cirrhosis of liver, softening of hypophysis, and enlargement of the viscera.

Microscopical Examination.—The hypophysis, as before stated, was so much softened that solid pieces could not be obtained, but a small amount of this semifluid tissue was collected and hardened in alcohol. Sections stained with hæmatoxylin and eosin show many fields where the tissue is not much torn; such fields are made up more or less of short rows of cells resembling tubules. In certain fields the row formation is more marked than in others; small capillaries run between the rows of cells. The cells forming these rows are more or less columnar, and certain single cells show this better than others; the arrangement in rows is more a dense linear accumulation of cells than an appearance due to the columnar or cubical character of the cells. These cells possess oval or circular nuclei which stain darkly—the nuclear membrane being well differentiated; many of the nuclei are large, many irregular in contour. Both nucleus and cell body vary in size considerably. The cell bodies are quite large; they stain well with eosin, as a rule, but occasional cells have a disposition to take the hæmatoxylin stain in place of the eosin in the cell bodies. Some large cells occur with the nucleus nearer one edge of the cell. The areas where tubule or row formation does not prevail seem to be made up of similar cells, but much scattered and disarranged. The connective tissue is very scanty and is confined to the region immediately around the blood-vessels. The blood-vessels show no changes; no earyocinetic figures are present. Sections of this hypophysis were submitted to Dr. Adolf Meyer, of Worcester, Massachusetts, who pronounced the condition to be one of hyperplasia.

Lung: The left upper lobe shows the microscopic features ordinarily seen in lobar pneumonia. The alveolar contents are markedly fibrinous, with considerable degeneration of cells—i. e., failure to stain. There is also

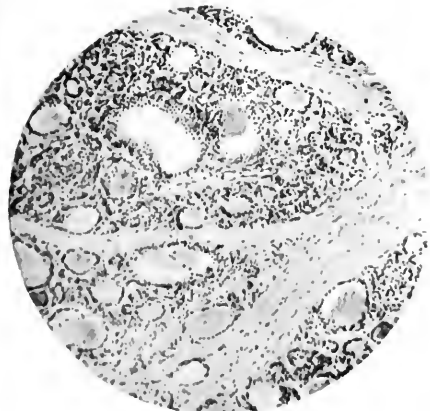


FIG. 3.—Section of thyroid gland.

considerable blood in the alveoli, and a marked pericardial and peribronchial deposit of coal pigment.

The abscess wall from the right lung shows a fibrinous wall beset with vessels; there are no eosinophilic tubules in the surrounding tissue. The lining possesses a few polymorphonuclear leucocytes.

Heart: The pericardial covering shows a slight increase in thickness of the under layers, with here and there larger bands of fibrous tissue extending into the myocardium. These bands are usually provided with vessels. The endocardium appears unchanged.

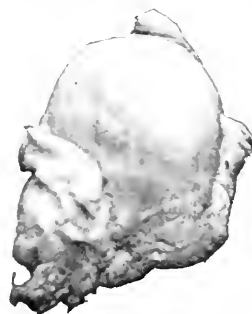


FIG. 4.—Front view of the hypophysis growth, Rathbun's case, actual size.

There is considerable pigment opposite the poles of the nuclei in the shape of small, golden-brown granules. Both segmentation and fragmentation of heart-muscle fibres occur, the fragmentation being the more marked. The nuclei of the muscle fibres exhibit various sizes ("giantism," "hyperchromatosis"). The arterioles show a slightly thickened tunica media; the connective tissue between the muscle fibres is but little increased. A few foci are seen where the muscle fibres have disappeared, and their places have been taken by a slightly granular grayish tissue in which are scattered spindle-shaped and oblong nuclei.

Stomach: The mucous membrane is very atrophic; the glands are fewer than normal and infiltrated with deeply staining round cells, many of which are fibrillated. There are accumulations of brown granules of pigment at the bottom. At certain points the round cells are accumulated in round foci internal to the muscularis mucosæ, which is thickened. The submucous coat is narrow and consists of a large amount of fibrous tissue devoid of nuclei. The tunica media of the vessels is thickened.

Small Intestine: The mucous membrane is very atrophic; the glands are very short; there is a marked increase in small round cells which stain darkly in the mucous coat. There are also many spindle-shaped cells, gathered around and between the glands. The muscularis mucosæ is very much thickened, and the connective tissue in the submucous coat is also increased in amount, and is hyaline in character. The vessels show thickening of the tunica media.

A mesenteric lymph gland is found to possess an increase in connective tissue; there is an increase in the number of blood vessels, as large as normal, which are filled with blood; a marked hyperplasia of the inner gland reticulum, and pigmentation with coal dust.

Liver: The lobular arrangement of the liver cells is much broken up by the connective tissue of the stroma.

The liver cells show more pigment here and there. There are very few tubules. The eosinophilic staining is uniformly good, except in a few areas of dilatation of the capillaries, as venous sinusoids.

The connective tissue is increased in amount in the shape of large, coarse bands, and there is a deposit of quite mature connective tissue. There are numerous vessels

with thin walls filled with blood in these bands. The intermediate-sized bands of connective tissue are more embryonal, and in these the vessels are more numerous. In addition to these there are minute bands of connective tissue made up mainly of rows of round cells. Increase in bile ducts is not so marked as is usually seen in atrophic cirrhosis.



FIG. 5.—Back view of the hypophysis growth, Rathmell's case, actual size.

Spleen: The Malpighian corpuscles are irregular, not well defined, usually smaller than normal, but otherwise negative. The spleen pulp cells are almost entirely made up of small round cells; nucleated red corpuscles are found in the sinuses; polymorphonuclear leucocytes are very infrequently seen. There are numerous accumulations of blood pigment. The blood-vessels all show great thickening, especially in the tunica media. There are no degenerative or necrotic processes observed. The con-

which is largely hyaline; in this are small arterioles with their middle walls thickened. The connective tissue about the larger ducts is very much increased in amount, and the lining cells are several layers thick. The ducts are irregular and tortuous; some desquamation of the cells occurs. The connective tissue about the acini appears heavier and more easily seen than is usually the case. There are numerous small foci of hæmorrhage and dilated veins filled with blood.

Adrenals: There is marked pigmentation with blood pigment. The engorged vessels in the medulla contain a marked excess of leucocytes. The nuclear staining is uniformly good. The trabecular leading into the gland from the capsule, and also the capsule itself, seem to be heavier than normal.

In the thyroid there is an increase of both interlobular and interacinous connective tissue, a great diminu-



FIG. 7.—View of skull (slightly tilted) from the inside, showing the enlarged sella turcica, also Wormian bones.

tion in size of the follicles, and thickenings in the tunica media of the blood-vessels.

Kidneys: The glomeruli show usually a slight capsular space; they are filled with blood; there is a marked increase in thickness of the walls of the capillary loops. There are numerous oblong nuclei in the glomerulus; many glomeruli are smaller than normal, in which case Bowman's capsule is usually thickened. There is a connective-tissue increase at the arterial pole of the glomerulus in the shape of short, spindle-shaped cells. The convoluted tubules show good nuclear staining; the protoplasm is very granular. The collecting tubes are negative. The blood vessels show a marked capillary engorgement both in the pyramids and cortex. There are similar changes in the small arterioles as were observed in other viscera. The connective tissue of the kidney is not increased. The subcapsular cysts show a lining of short cubical cells. There is a deposit of blood pigment in the pyramids.



FIG. 8.—View of skull from the outside.

nective tissue is slightly increased in the finer reticulum; the large bands are heavy and contain fewer nuclei than normal.

The pancreas exhibits a marked increase of stroma,

Cranium: The antero-posterior diameter is twenty centimetres; the bipiternal, fifteen centimetres; the greater part of the coronal suture is obliterated outside, and entirely so inside; the same holds good for the sagittal, but the lambdoid is open on both faces. The metopic suture is present for 2.5 centimetres at its lower end.

The ridges for muscular attachments are well marked. This is so much the case over the mastoid and suboccipital regions that the surface is studded with masses and nodules of bone from three to six millimetres in thickness, from which the occipital protuberance stands out as a large boss ten millimetres long. The external occipital crest is very well marked also, forming a sharp ridge. The styloid process is only twelve millimetres long.

The malar bones are enlarged and very prominent, causing a deep hollow below them. The suture between the malar and maxilla is obliterated on both sides.

The supraorbital ridges are enormous, as may be seen from the photograph. A piece was removed from the anterior wall of the frontal sinus, showing that the bosses are not due to the thickening of the plates of the skull, but to increase in the size of the sinuses.

The orbits were enlarged in both their transverse and vertical diameters. The sphenoidal and sphenomaxillary fissures were enlarged also, the latter being six millimetres wide. The external pterygoid plates are very rough and thick. The hamular process is large (twenty millimetres). The first and second molars are missing on both sides below, and the first and second on the left above.

The nasal septum is deviated to the right. The external auditory meatus is enlarged, but there are no exostoses.

The mandible is asymmetrical, the right ramus being two centimetres longer than the left. This is partly compensated for by the increased length of the left coronoid process. The condyles are three centimetres wide; the left coronoid process is unusually high (three centimetres), thus making the sigmoid notch on that side narrow and deep. The right coronoid process is but twenty-three millimetres high. The muscular ridges are well developed; there is a well-marked osteophyte, eight millimetres thick, at the angle of the jaw on the right side. The bone, as a whole, is very massive and thick, the body much inclined forward. The rami join the body at an obtuse angle, resembling that of the edentulous jaw of old age.

On the interior of the cranium there are numerous osteophytes over the base and one on the vault measuring 2.5 centimetres by 12 millimetres. There are two Wormian bones in the roof of the right orbit and four in the left. The superior border of the petrosa is unusually sharp on both sides. The sella turcica measures 4.5 × 2.5 × 2 centimetres; the floor is pitted by several large holes. On the right side the boundary between the sella and middle fossa of skull has quite disappeared. On the left it remains in part. The anterior clinoid process is unusually well marked; the dorsum sellae is very thin and parchmentlike. The bones of the skull are not thickened; indeed, over the temporal region they are unusually thin.

The clavicle is 15.5 centimetres long; the sternal end is prominent, and the articular surface for the thorax is increased in size. The muscular impressions are unusually well developed on this bone as elsewhere.

The scapula is 15.5 centimetres deep. The scapular index is 64.6. The supraspinous and subscapular fossae

are unusually well marked. The muscular impressions on vertebral border, and especially the axillary border, are large and rugose.

In the upper extremity, the humerus is 32.5 centimetres long, the ulna 23 centimetres, the radius 25 centimetres. The muscular impressions in the upper part of the humerus and ulna are again noticeably prominent. The lower end of the radius is very large; the carpal bones are unchanged. The metacarpal bones and phalanges are rough; the distal phalanges very large—widened, thickened, and rough.

In the lower extremity the femur is 12.5 centimetres long, thick, and clumsy looking; the impression for the gluteus maximus is well marked, almost forming a third trochanter; otherwise there is little change. No change is to be found in the tibia or fibula. The insertion of the tendo Achillis into the calcaneum is marked by an irregular mass of osseous tissue. The ungual phalanges, like those of the upper extremity, are thick, flat, and rough—studded with osteophytes.

There was no kyphosis.

(To be concluded.)

SOME OBSERVATIONS ON MALARIAL DISEASE IN THE PROVINCE OF SANTIAGO DE CUBA.*

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THE most prominent of endemic diseases in this district is malarial fever. The statement has been made by a native physician of reputation that more people die from it yearly in this island than from all other diseases combined. No matter how mild the case, the disease in the tropics should always be regarded as of possible serious import and the case treated accordingly. It is a disease that often attacks the natives, but the newcomer from northern countries rarely escapes its influence. If not directly fatal, it always undermines the health, and debilitates and drains the system, thereby rendering it more susceptible to other infections and paving the way for organic diseases and chronic invalidism.

Malarial disease presents so many different forms that it frequently leads to fatal errors in diagnosis, by closely simulating grave organic and nervous lesions. I have seen it mistaken for acute Bright's disease, nephrolithiasis, spinal hæmorrhage, apoplexy, sunstroke, epilepsy, dysentery, beriberi, yellow fever, typhoid fever, etc., when a careful microscopical examination of blood specimens would reveal the true nature of the malady and point out a line of treatment with remedial measures of truly specific value. It can safely be asserted that a timely hypodermic or intravenous injection of quinine in solution has saved a good many lives. The

* Read before the chief surgeon of the Department of Santiago, Cuba, and transmitted from the office of the surgeon-general of the army.

combination of quinine and urea (quinine dihydrochloride carbamide, containing sixty-nine per cent. of pure anhydrous quinine) has given great satisfaction, and the writer has used it since 1893 in hospital and private practice in a large number of cases, without producing a single abscess. It dissolves in an equal quantity of distilled water. The solution being alkaline, the quinine is not precipitated by coming in contact with the alkaline juices of the body, and is therefore readily absorbed. Thirty and even forty-five grains in twenty-four hours have been given in grave cases of malarial hæmaturia with good result, without any apparent harmful effect from the urea existing in combination with the salt. Native physicians in this district seem to regard all hæmaturia as of malarial origin, and exhibit rather large doses of quinine. The mortality in these cases is said to be high, and well-informed physicians from the southern United States, where hæmaturia also is frequent, allege that quinine only adds to the renal inflammation, and abstain from its use entirely, with a seemingly lower mortality rate. Clinical experience and microscopical investigations have taught me that quinine in large doses does harm when the plasmodium is absent from the blood, but is decidedly beneficial when the plasmodium is present; in other words, when the hæmaturia is really of malarial origin.

The malarial organism finds a most favorable soil in certain regions of this district, where the altitude is low and hygroscopic influence marked. The city of Santiago is located on a level stretch of ground surrounding the extreme upper end of the bay, with a gentle slope upward toward the east, terminating in a plain with hilly elevations, distantly surrounded by rather high mountains. The hills, of such types as San Juan, El Poso, El Caney, etc., are numerous, with a gentle slope, well separated from each other, so that the intervening land is nothing more than an irregular basin, more or less densely covered with underbrush and a rich tropical flora. The geological conditions of these lowlands may, in a general way, be described as alluvial soil, composed of layers of sand with an abundant vegetable growth, and an impermeable subsoil of sand, clay, and sedimentary rocks, especially abundant in and about the town of El Caney. A great number of ravines and old river beds—converted into torrents during the rainy season—suggest extensive subterranean water courses and an abundance of subsoil water. Marshes are numerous, but not very extensive; and, while some are called into existence by the rainy season, others are permanent. The drainage from these marshes is either very defective or totally absent, and we find the soil either water-logged or partially submerged; in some places this condition is concealed by very dense underbrush and abundant vegetation, preventing free circulation of air and favoring vegetable decay. A good part of this land, under cultivation prior to the insurrection, was completely abandoned several years ago, and is now a dangerous

focus for malaria. This deplorable condition is very striking in and about the village of El Caney, which is regarded by the natives as a hotbed of malarial disease. An old resident told me that hardly any one now living in the town was free from fever.

A curious conformation is noticed in connection with malaria in younger children: the abdomen appears greatly distended and bulges forward as in advanced ascites or obesity. The abdominal veins are much enlarged. On palpation, the abdominal wall is found to be of normal thickness, but tense and elastic; the spleen is enlarged, sometimes to an enormous extent; in one boy of twelve years the spleen extended from the seventh intercostal space to the anterior superior spinous process of the ilium, and from the quadratus lumborum an inch to the right of the umbilicus; the borders were thick and rounded, and imparted to the touch a sense of firm resistance, like a solid piece of rubber. The anterior surface was rough, but not adherent. This child, though up and about like all these children, was markedly anæmic, and very dull and indifferent. The unusual abdominal distention is caused by considerable tympanites; this may partly result from general malnutrition or intestinal parasites—which are very frequent among the poorer children—but to a great extent is due to a passive hyperæmia of the abdominal viscera, notably the spleen and liver.

The period of time when malarial fever first appeared in this part of the island can not be ascertained, owing to the lack of medical statistics. It is certain, however, that it has existed for a long time under the name of "calentura," a term which is nowadays applied to any form of fever by the natives. At the present time malarial disease is very prevalent, not a very surprising fact if we consider the following conditions *in toto*:

1. A tropical climate with abrupt temperature changes.
2. An unhealthy soil, with inadequate drainage, and a constantly changing level of ground water, with areas of water-logged land and marshes.
3. Profuse tropical vegetation, with decaying organic matter furnishing a most favorable breeding place for suctorial insects.
4. Areas of land, previously cultivated, lying waste for several years.
5. Hygrometric variation; a prolonged rainy season flushing old river beds which are entirely dry during the rest of the year.

These associate conditions are recognized as potent factors in the biology of malarial disease, not only by stimulating plasmodial propagation, but also by their injurious influences on humanity. The strongest predisposing element in the development of any disease is a lowering of vital resistance, be this through unsanitary surroundings, intemperance, or undue exposure. As soon as the individual standard of health is lowered through any or all of these agencies the morbid influ-

ences find a favorable soil and flourish, and this applies especially to malarial disease. There is no doubt that a good many people, even though directly exposed to the malarial poison, escape infection. This can only be explained on the ground of a perfect physiological mechanism; let this individual, however, undergo severe mental strain or prolonged and unusual physical exercise, or become intemperate, then the perfect physiological machinery breaks down, and the system can no longer withstand the invasion of the poison even on moderate exposure. A marked illustration is offered by the late campaign. Strong, healthy men from all parts of the United States were sent to the island; some, failing to adapt themselves to tropical influences, continued to pursue their northern habits, and, not being used to the high temperature and marked degree of humidity during the day, threw off all superfluous clothing and rashly exposed themselves to the chilling night air; others, in trenches, were forced by the existing circumstances to endure all sorts of hardships, constantly exposed to malarial poison. A number of these men succumbed to the disease; a great many have come out alive, but are nothing more than physical wrecks. Excesses and intemperance of any kind are powerful predisposing factors in the tropics, particularly at the end of the rainy season, when malarial prevalence reaches its maximum.

The exciting cause of malarial fever was discovered by Laveran in 1880, and first studied in America by Sternberg in March, 1886, at the Johns Hopkins University. The plasmodium is now classified as a hematozoon, belonging to the sporozoa, which, as R. Pfeiffer has recently demonstrated, closely resemble the coccidia. Notwithstanding the constant association of the plasmodium with most malarias, some observers still look upon the *Bacillus malarie*, discovered by Tommasi Crudeli in 1879, as the *causa malarie*. Sternberg, in 1880, by a series of exhaustive experiments, conducted in his laboratory in New Orleans, proved conclusively that this bacillus did not exert any etiological influence on malarial disease. This view is now generally accepted over the western hemisphere.

From the foregoing it will at once be assumed that the parasites met with in malarial disease are very numerous in this part of the country; the malignant varieties greatly exceed the benign, the latter being generally represented by double or multiple infections.

The benign forms encountered so far have been in the foreign element mostly, in soldiers and civilians from North America. This leads me to suspect that the malarial infections antedate their arrival here on the island, and this in a good many instances is supported by the previous history of the patient. In a few specimens the quartan parasites were discovered, in the rest the tertian type, mostly of the double variety. In isolated cases a multiple tertian infection was noticed; one such case was under my care at the Josiah S. Sisson General Hospital, Fort Monroe, Virginia. The patient

was sent from Ponce, Puerto Rico, to the hospital for treatment. The temperature chart which accompanied him showed a distinctly remittent fever curve. Examination of the blood revealed the benign tertian parasites in all stages of development. Under moderate doses of quinine the remittent fever gradually resolved itself into an intermittent quotidian, and later into tertian paroxysms, which yielded eventually to quinine. It is not uncommon in the North to see a quotidian fever, at times even without specific medication, change to the tertian type.

In the tropics, however, it more frequently takes on the malignant form. In the active element, although a number of cases were examined, benign parasites did not come under the writer's observation.

The malignant type seems to be the endemic form of malarial parasite in this region; the pigmented and unpigmented malignant quotidian parasites are notably abundant, in the native as well as in the foreign element. They appear as minute amœboid bodies, with constant tendency to ring formation; after a few seconds of rest they would diffuse themselves through the cell substance, almost disappearing from view. They seem to obtain nutrition in this manner in their early phases, precipitating fine black pigment in the one, but not in the other variety. The two types have not been found associated. The unpigmented forms were very frequently found in dark bronzed red blood-cells. The number of these parasites in the circulation must be enormous; in one field as many as eighteen hyaline bodies were found (one-twelfth oil-immersion, Bausch and Lomb). The crescents in both these varieties seem to be nearly alike; they are smaller but thicker than those found in the tertian malignant form; the central cluster of pigment is rather fine and gradually arranges itself in the form of a fine network, the crescentic body contracting—i. e., becoming shorter and rounder. Their resisting power must be very marked, for one was observed undergoing gradual changes for a space of six hours, assuming a finally rounded form, the central pigment resembling a delicate coil of black thread.

In the malignant tertian variety the parasites were found to be much larger than, in the malignant quotidian, ranging in size from a third to two thirds of that of a red blood-cell, with very fine, active, black pigment. The earlier stages are amœboid, but these movements gradually cease. The crescentic form is larger than in the malignant quotidian, and the central pigment coarser and more active; they are frequently found adherent to the red blood cell.

Mixed types were also met with; in one case only crescents were found, the patient being under observation for two weeks; he was very anæmic, had a greatly enlarged spleen, but was practically free from fever. In three cases of malarial hæmaturia, or tertian hæmaturia, a few hyaline unpigmented bodies were found, as well as fully formed pigmented parasites, which were

bling, but larger than, the malignant quotidian, with very fine yellowish-brown pigment; only one case presented crescents. The light color of the pigment is probably due to deficiency or marked diminution of the hæmoglobin.

In three cases the writer has met with a small, rod-shaped body, of a dark bronze color, of about half the length of the diameter of a normal red blood-cell, and a sixth of its length in thickness; the ends were somewhat thick and rounded. The organisms were not numerous in a specimen but very motile, rapidly passing across the field by a peculiar swinging motion of the posterior half; there was no amœboid movement; in its centre a highly refractive spot was seen, closely resembling a spore. The organism attacked a number of red cells in its course, apparently endeavoring to enter one; at times it would lie in close apposition to a cell. While under observation it gradually increased in thickness, especially at the ends. The movements became slower and finally ceased, and the bright refractive spot was seen to escape from it, dancing about between the adjacent cells, where it seemed to penetrate one and become lodged. The organism itself again became motile, the difference in thickness between the extremities and the centre becoming more marked, till finally a constriction separated the anterior from the posterior segment. In the latter another bright spot was visible. The organism divided into two parts at the constricted point. The posterior segment, with its spore, becoming round, entered a near-by red blood-cell, where it remained without any further change; the anterior segment was lost sight of. In one case this organism was found associated with small tertian parasites; in the other, with two very fine hyaline unpigmented bodies, resembling the malignant quotidian. In all these cases a large number of highly refractive spots, identical in appearance with the discharged spores, were found, both free in the plasma and inclosed in the red cells. Owing to the limited number of cases studied so far, no deduction will be made as to the probable pathological significance of these organisms; they will be reported on at a later date.

It is possible that the various clinical types of malarious fever are produced by one form of plasmodium, and that the varieties we observe are the result of alterations the parasite undergoes in the system, influenced possibly by climate and the patient's vital resisting powers—i. e., by the condition of red blood-cells, leucocytes, and nervous force. That these factors exert a great influence can not be questioned. We know that through some agency plasmodia are allowed to lie dormant in the system for a year or more without materially influencing the patient's condition, but when the system is depressed by a sudden change of climate or diseased processes the soil for microbic development is rendered favorable and the parasites multiply. We further know that some individuals recover from mild malaria (plasmodia present in the blood) without the use

of quinine, some with very little quinine, while others recover only under very large doses. If we could grant the possible existence of a malarial antitoxine the problem could be easily solved; but, if we admit that, would this not force us into admitting immunity as the direct result of antitoxine formation, as is the case, for instance, in yellow fever? Clinical experience does not bear out this statement; on the contrary, one malarial attack distinctly predisposes toward another. Residents in malarious districts—born and bred there—are by no means exempt from malaria; they are not immune; their system has adapted itself to tropical influences and surroundings; they are, moreover, fully acquainted with the dangers of the tropics, and avoid as much as possible violent exercise, exposure to direct heat of the sun, and drenching rains. They realize the importance of changing their damp clothing before the sun sets, and are not given to excesses of any kind. For these reasons they are less liable to malarial disease than non-residents, but when they are attacked by it the disease does not tend to pursue a mild course; this is especially true in regard to the lower classes, with whom fatal malignant types are common. These facts in themselves directly oppose the theory of malarial immunity; it appears to be more a question of vital resistance and physical tolerance than of antitoxine formation. The plasmodia within the human organism appear to be possessed of a remarkable affinity for the red blood-cells, owing probably to the amount of free oxygen they contain, which latter is an essential factor in the developmental process of the parasite. They seem to derive the necessary nutritive elements from the albuminoid substance—the globulin—changing the hæmoglobin as they mature into melanin, which is deposited in the form of fine or coarse granules. It is possible that this results from the abstraction of oxygen and a gradual disappearance of the globulin. Certain amounts of waste products—excrementitious matters—are formed which are toxic to the human organism. When sporulation takes place, and the parasite-containing blood-cells rupture, the spherules are suddenly thrown into the plasma, giving rise to malarious manifestations. What is this due to? To an impression made by the presence of the foreign bodies circulating through the basal ganglia and pontobulbar nuclei? To rapid invasion of new red blood-cells by the hyaline bodies? To a setting free of the excreta—toxines—of the sporulating group, profoundly shocking the sympathetic nervous system? It is possible that the explosive phenomena observed in malarial paroxysms are caused by a combined action of these three agencies.

What becomes of the immense number of spherules set free at each sporulation? In some cases, probably, nearly all enter red blood-cells, and bring about a fatal issue by destroying an immense number of oxygen-carrying cells. In most instances, however, only a limited number of organisms pass into red blood-cells, starting

on a new cycle of development, possibly under altered circumstances; the majority of the free bodies, following sporulation, probably perish in the plasma from want of oxygen or are killed through phagocytosis or other influences (cells of liver, spleen, and lymphatic glands). We are aware that certain plasmodial types require a certain amount of time to complete their cycle of development; we also are aware of the fact that in most instances of benign type the attacks anticipate—that is, the plasmodia reach the sporulating stage an hour or two sooner than in the preceding paroxysms—which means that parasites either find the soil more favorable or else have increased in virulence. If an antitoxine were produced by the plasmodia, as some suggest, would not this in itself stamp malarial fever as a self-limited disease? Would not these parasites, by constant multiplication, produce so much antitoxine as to finally overpower them? If the antitoxine theory were maintained, would it not mean immunity, or at least partial protection against further attacks, instead of rendering the system all the more susceptible to plasmodial influence? If an antitoxine does exist, it is produced outside of the human body and certainly not within.

A careful study of the clinical forms of malarial fever combined with microscopical and post-mortem observations has demonstrated the fact that the plasmodia exhibit a marked preference for rich capillary plexuses, where circulatory pressure is at its minimum, the flow of blood constant, and metabolic changes—tissue osmosis—very active, with an abundance of red blood-cells and high temperature. We find plasmodial nests in the plexuses of the spleen, liver, kidneys, lungs, intestines, brain, and spinal cord, giving rise to a multiplicity of symptoms—from a moderate neuralgia to fatal coma—with explosive phenomena resulting from the concentration of the malarial poison.

The existence of the parasite in its primordial state—*i. e., extra corpore hominis*—has not been demonstrated as yet, and is still a matter of conjecture. That the parasite can flourish outside the human body has been demonstrated by exclusion only, and how it gains entrance into the system is still a theoretical point. One person can not contract malarial disease by coming in contact with an individual suffering from it, which would lead us to suppose that the parasites are not excreted, but destroyed in the system. We do not know how malaria is propagated. It is assumed that it might be spread by drinking contaminated water; this, however, is hardly a source of danger, as the acid in the gastric juice would destroy the plasmodia. It is far more likely that access is gained into the system by inhaling infected dust. It has been demonstrated experimentally that an injection of fresh malarial blood, containing plasmodia in active state, into the vein of a person not suffering from the disease is followed sooner or later by an outburst of malarial disease. The weight of this evidence would tend to prove that the infection

is dependent on a direct circulatory inoculation, probably by suctorial insects, of which the mosquito is a type; their almost constant presence in the vicinity of swamps and malarious regions is certainly in favor of this theory. Sternberg suggests that the plasmodium, like other ameboid protozoa, may find its normal habitat external to the bodies of its animal hosts, upon the stems and leaves of water plants rather than in the water itself, for when marsh vegetation is submerged by high water malarial fever does not prevail in the vicinity of such swamps. This applies directly to this district, where malaria is less frequent after the rainy season has become well established, and the water-logged areas with their abundant vegetable growth are covered with water; the danger is greater when the water level sinks, partly exposing the soil. There are at least three swamps known to be malariously infected in this vicinity; they are of rather small size, with the centre partly submerged, while the periphery is water-logged and profusely covered with vegetation.

THE PRACTICAL APPLICATION OF THE SKIASCOPE.*

By J. W. SHERER, M. D.,

SECRETARY OF THE MIDLAND OPHTHALMOLOGICAL SOCIETY, KANSAS CITY, MO.

I AGREE with Dr. Edward Jackson, of Philadelphia, that skiascopy affords the most accurate means of refracting the eye. In order to yield exact results, however, the skiascope, like other instruments of precision, must be in competent hands, and I need scarcely add that a great deal of practice and training are necessary to give the requisite expertness.

The skiascope is capable of revealing very exactly the total refraction of the eye in every meridian, and especially of the central visual area of the cornea. Withal it supplies valuable data of other conditions, as irregular astigmatism, keratoconus, positive and negative spherical aberration, and if any residual accommodation remains to embarrass the refractionist it will be revealed. It yields such a clear conception of irregular astigmatism as can be secured by no other means.

The skiascopic examination, as originally made by Bowman, was done with the ophthalmoscopic mirror. He merely observed that conical cornea and irregular astigmatism were shown by it, and that regular astigmatism gave a linear shadow.

In 1872, John Cooper, of London, submitted some rudimentary observations, and two or three years later the first real progress was made by Cugnet, of Lille, who recognized the superiority of the plane mirror and its power in diagnosing all forms of ametropia.

Menzin and Parent now lecture its study in Paris,

* Read before the Midland Ophthalmological Society, Kansas City, Mo., February 13, 1899.

and Charnley, Lytton, and Forbes in London. In 1882, 1883, and 1884 Chibret, Story, and Priestley Smith developed the use of the plane mirror. Edward Jackson, who has probably done more than any one else to thoroughly establish skiascopy on a sound foundation, both scientifically and practically, in 1885 published an excellent monograph, which showed a perfect mastery of every detail of the test. Since then Dr. Jackson has been a main contributor to the literature of the subject, and author of one of the best text-books upon it.

For practical utility the text-book of Dr. James Thorington, of Philadelphia, is probably the best now extant. This is one subject in ophthalmology in which the names of Helmholtz and von Graefe do not appear.

As to the practical application of the test. I find a very general dissatisfaction among oculists at large over its employment. Inaccuracy is the principal fault charged, and inability to rely on its measurements of the refraction is also complained of. This I believe is almost entirely the fault of the observer. There is such a multiplicity of reflexes, such an entanglement of shadows, when the point of reversal is reached, such a nicety of judgment to be exercised in selecting the area to be measured, while ignoring the movement of the shadow in other areas, and such a vast diversity among eyes as to the amount of spherical aberration present, that it really takes much trained skill to make reliable data of the refraction.

Primarily, the room must be absolutely dark. Ignoring this dictum is a prolific source of disappointment. The best original source of light is an Argand gas burner mounted on a suitable bracket, and covered by an asbestos chimney, well blacked, and with but one orifice seven millimetres in diameter. The orifice should oppose the brightest part of the flame. The bracket should have an easy swing of rather a wide sweep to enable the observer to operate at different distances and keep the light near or remote from the mirror at will.

For exact measurements the mirror should be seven millimetres only in diameter with a sight hole of two millimetres and a half. The orifice needs to be well blacked, and a mirror with the mercury scraped off the back and not perforated is the best. A very small mirror is necessary, because it is only the rays of light in the centre of the illuminated area on the face which give the correct refraction. When the margin of the round disc of light which the mirror throws on the face is used, there is an angular deviation of the rays of light which prevents the most exact results.

The eye not under observation should be covered, and if the patient is requested to look at the surgeon's forehead just above the little mirror, the eye will be held about right to give the refraction of the visual axis, and still the patient will not be pained by gazing directly at the bright light.

Cycloplegia must be absolutely complete. The accommodation and refraction of the observer's eye are

matters of indifference. The eye of the patient, of the surgeon, and the light must all be on the same plane.

The lenses placed before the patient's eye should be clean and stand exactly at right angles to the visual axis. The pupil should occupy the centre of the lens. Plano-convex and plano-concave lenses should be used with the plane surface turned toward the surgeon. This rule applies to lenses up to about 4 D.

There are two movements to be given the mirror, the quick and the slow. The former is necessary when determining the character of the error of refraction and when the amount of uncorrected error present is large. When the error is nearly corrected, the last fine measurements are being taken and the reversal point is very near, a very slow movement of the mirror is necessary on account of the very swift motion of the shadow. A meterstick with a graduated scale of focal lengths in dioptries is extremely useful.

I do not wish to take up the optical principles of refraction with the shadow further than to say that the reversal point, which is the objective point of the surgeon, is the point where the rays emerging from the illuminated eye are brought to a focus. Within this point the visible image of the fundus is erect and the shadow moves with the mirror; beyond it the image is inverted or aerial and the shadow moves against the mirror.

The space is considerable between the point where a clear erect image and the point where a clear inverted image is secured, and within this space the image is blurred and practically indistinguishable. On the contrary, the point where reversal in the movement of the shadow is from erect to inverted is clean cut and sharp, it being hard to find the place where no movement either way occurs, but as the reversal point is approached the central illuminated area under observation is seen to grow smaller, brighter, and the movement swifter.

When the observer is remote from the reversal point the shadow moves very slowly; when near it the movement is very swift. Hence when working near the reversal point, I repeat, the mirror should be moved with extreme slowness.

Another most important point is in regard to the central shadow in contradistinction to the peripheral shadow. In a simple case of hypermetropia or myopia, at a distance from the reversal point, a large illuminated central area is seen surrounded by a dark ring. As the reversal point is approached the central area grows smaller, the dark ring contracts toward the centre, and a second ring appears around the first. This is bright and has a movement in a sense contrary to the central spot. This arises from the spheric aberration due to the difference in curvature of the centre and periphery of the cornea and lens.

The alert diagnostician will not allow this to deceive him when making the last fine measurements with a very small central shadow of very swift movement and a

very large peripheral shadow with a contrary movement almost swallowing up the former.

Varying the distance at which the mirror is held is a valuable aid. Thus, in a case of simple hypermetropia a lens may be placed before the eye sufficiently strong to bring the reversal point to within a few feet of the eye, and then by testing at different distances the erect and inverted movements will be found, and finally the exact point of reversal. This can then be measured with the meter-stick and the exact lens ascertained which is necessary to carry the reversal point to one metre. Thus, if the hypermetropia equals 3 D. and a 5 D. lens is put up, the reversal point will be found accurately at fifty centimetres, a little within which an erect movement and beyond which an inverted movement will be found. Deducting 1 D. will put the reversal point back to one metre, and deducting still another 1 D. for that distance the error will be known to be 3 D. of hypermetropia.

In myopia, the reversal point being naturally near the eye, no lens will be required to make the first estimate unless it be very high. When the reversal point has been brought to 1 metre 1 D. must be added to make the still convergent rays parallel and thus adjust the vision for distance.

The skiascopic finding which gives the best satisfaction for reading is one which gives a very slight erect movement, and which stops just short of entire neutralization of all movement, much more of complete reversal.

In astigmatism the round central spot of simple hypermetropia or myopia is converted into an oval, or if the astigmatism is high enough is stretched out into a long band, broader or narrower according as the observer is near or far from the reversal point of the opposite meridian.

The shape of the central illuminated area also depends upon the relation of the observing eye to the reversal points of the two principal meridians. Thus, if the observer is equidistant between the two points the area is circular, but in one direction moves with, in the other against, the mirror. On the other hand, if the observing eye is closer to that reversal point which is farther from the patient—i. e., the reversal point of the more hypermetropic or less myopic meridian, the band will, in hypermetropia, occupy the meridian of less error and marks the angle for the correcting cylinder.

In myopia, however, the band will now occupy the meridian of greater error, at a right angle to which the cylinder should be placed. In either hypermetropia or myopia the movement will be erect or inverted, according as the mirror is within or beyond the reversal point of the meridian inspected.

When the observing eye is closer to the proximal reversal point the same phenomena are observed, but *vice versa* to the foregoing as to the direction of the band and its indication for the cylinder.

In low astigmatism the indication for the axis of

the cylinder may be read wrongly owing to the fact that the edge of the illuminated area cuts the pupil at different angles according to the direction in which the mirror is turned. The straightest, longest edge is to be sought for and constitutes the desired indication.

In higher astigmatism there is no trouble of this kind; but another difficulty arises, since whether the light is made to travel obliquely or at right angles to the band, still the shadow seems to move perpendicularly to the band. If the mirror is moved in the long axis of the band no satisfactory movement can be seen, and hence observation is practically limited to the one meridian opposite to that occupied by the band. This difficulty is to be obviated by placing a suitable cylinder in the axis of the band.

The reversal point for each principal meridian is to be determined separately. If the astigmatism is low this can be done with spheres alone. The refraction of each meridian being noted, the requisite sphere and cylinder can be calculated. If the astigmatism is high a cylinder is needed to at least partly correct the astigmatism so that the movement of the shadow can be seen in each meridian.

Normally, and unless the error is over corrected, the band of light marks the meridian of lesser error—i. e., the meridian of greater curvature in hypermetropia and of lesser curvature in myopia and is the axis for the cylinder. A few trials enable one to always bring it to a maximum of intensity by putting up a lens which approximately corrects the meridian of lesser error and pushing the light away from the mirror.

The presence of astigmatism may also be recognized by a difference in the rate of movement in the two meridians. If the observer is within the proximal reversal point an erect movement will be seen in both meridians, but the rate of speed will be different in each. With considerable astigmatism the observer may happen to be located between the two reversal points, in which case, of course, he will see erect movement in the meridian of greater error in hypermetropia, and of lesser error in myopia, and *vice versa* as to inverted movement in the opposite meridians.

Having located and measured both proximal and distal reversal points, they should then both be brought to one metre and the central area should then be round, move with equal speed, and on trying a little nearer and a little farther away both should be found to reverse at just the same time. Then by deducting 1 D. for hypermetropia and adding 1 D. for myopia the trial case reading test may be proceeded with.

The skiascopic examination is completed in a few minutes, and saves much time and labor at the trial case, which is by no means overvalued by the skiascope, but remains the ultimate *arbiters* of error. Even when the operator is not fortunate enough to get the exact refraction with the skiascope, he is still greatly aided by it by the accurate conception of the refraction it

gives him. This is particularly true in compound and mixed astigmatism. In all forms of errors in children, malingers, and irresponsible persons it is invaluable.

I occasionally get the best results and a trifle more than $\frac{1}{2}$ vision with the skiascopic test, and rarely have to change more than a small fraction of a dioptre from the sphere to the cylinder, or *vice versa*, in order to get the best reading test. The scissors movement, which is frequently seen and which is so perplexing, is commonly attributed to tilting of the lens, such as sometimes results from reading lying down. It is caused by one part of the pupil giving an erect, and the other side an inverted, movement.

The dark, shadowy band between the two is the reversal point for the area which it occupies. By varying the distance of the mirror and trying different lenses this area may be brought to the central visual area and the reversal point to one metre. This, then, is the right correction, the necessary allowance being made for distance.

The lens selected should largely neutralize the opposing to-and-fro movement which, on account of opening and shutting like scissors blades, has given the name to the condition. As to irregular astigmatism, I will only say that it is instantly recognizable with the skiascope by the heterogeneous jumbling of the shadows. Of course, it is as incorrigible by one means as another, still, the skiascope is very useful in showing the true status of affairs.

The peculiar appearance of the pupil in keratoconus when inspected with the mirror, originally led to the discovery of the shadow test, which was early suggested for its diagnosis only. This consists of a triangular area of light with its apex occupying the centre of the pupil and its base to one side, which is seen when the mirror is rotated laterally. Turning the mirror causes the cone of light to wheel round the centre to the side to which the mirror is turned.

The optical condition amounts practically to one of high myopia with much negative aberration—i. e., there is lower myopia at the periphery of the pupil than at the centre. Consequently, the shadow moves against the mirror throughout the pupil; but, the reversal point for the periphery being much nearer the observer's eye than the reversal point for the centre, the shadow at the periphery moves much more rapidly and seems to literally run around the centre when the mirror is rotated.

A case of keratoconus should never be abandoned until it has been measured with the skiascope, which, if the lesion is low, may enable the oculist to correct it when all other means fail.

Expert kiascopists habitually take the refraction to within ± 2 D., and I have cognizance of clinics where one skiascopist, a matter of the shadow test, has been able to do the work which formerly occupied several men at the trial case.

If those of my colleagues who have found the skiascope unsatisfactory and unreliable will try it with the suggestions I have made, I am confident they will not be disappointed, but will concede its real value.

310, 311 RIDGE BUILDING.

AN ARCUS SENILIS TATTOOED.

By W. L. BULLARD, M. D.,

COLUMBUS, GA.

Two narrow, opaque crescents, from three to five millimetres wide, an upper and a lower, situated close to the margin of the cornea, constitute a pathological condition named (wrongly) arcus senilis. In its incipency the marginal ring is not complete, but later becomes so by an absolute coalescence of the two crescents. The color varies, according to its stage of development, from a milky white to that of chalky whiteness in advanced cases. As its name implies, it has been commonly supposed to belong to old age; but this certainly seems to me to be a mistake, as it is not infrequently seen in young subjects under thirty years of age, and it is said to have been seen occasionally in children. I am also slow to believe it to be an indication or sequela of degenerative changes in the heart and arteries, inasmuch as I have seen it in patients whose age numbered as many years as eighty, and whose hearts had no degenerative changes; I have also seen patients with atheromatous degeneration whose eyes showed no arcus senilis. I have frequently seen it in cases of senile cataract, in the extraction of which by the corneal incision, which passes through the arcus senilis, heals as readily and with just as good results as in cases in which nothing of the kind exists. While I have never known it to interfere with vision, yet occasionally I am consulted regarding the abnormality, and in such cases advise non-interference, assuring the patients that it will never produce blindness, and that they need not worry about it. Sometimes, however, patients are not content with such advice, stating that, while it is not painful, and vision may never be affected, yet they feel it is an abnormality and an "eyesore" to them, and they request its removal in some way. I remember that some twelve years ago a schoolmistress, about thirty years of age, consulted me in regard to a perfectly developed arcus senilis in each eye. (I do not remember having ever noticed it in one eye only), and I gave her the usual advice—that is, non-interference; but this did not satisfy her, and she again called and pleaded for removal. I told her that with India ink I might be able to tattoo the "eyesore" black, the natural color of her eye, and in this way improve the eye from a cosmetic point of view, so to speak. I also told her that I had never operated on one in this way, yet, if its presence worried her to the extent alleged by her, and she was willing to have the operation repeated every few years (India

ink tattooed into the cornea is absorbed after a time), that I would operate on her eyes. She most willingly consented, and after three *séances*, a few days intervening between each, both arcus were tattooed under cocaine anaesthesia. The reaction was not at all severe, and the result proved to be perfectly satisfactory, and continued so for three years, after which time I lost sight of her. When physicians are anxiously consulted regarding an arcus, as a rule, the patient will be found to be under forty years of age, hence it may be suspected the worry is caused more on account of looks than from any discomfort or defect of vision produced thereby.

1408 THIRD AVENUE, COLUMBUS, GA.

Therapeutical Notes.

Bromol.—Bromol is described in the *Riforma medica* for March 16th as a yellow antiseptic powder useful in the treatment of ulcers and wounds. The following formulæ are given:

R Bromol 60 grains;
Sterilized vaseline 450 "

For an ointment.

R Bromol 15 grains;
Sterilized olive oil 450 "

For inunctions.

Treatment of Trachoma.—The *Riforma medica* for March 16th ascribes the following to Blöbaum:

R Sulphate of copper,
Salicylic acid,
Hydrochloride of co- } of each, 15 grains;
caine,
Vaseline 150 "

M.

For external use. The existence of corneal ulcerations does not contraindicate the use of this ointment.

A Substitute for Salicylate of Sodium.—The *Riforma medica* credits the following prescription to Descoompan for use in cases where there is an intolerance of salicylate of sodium:

R Salicylate of lithium $7\frac{1}{2}$ grains;
Sulphate of quinine, from $1\frac{1}{4}$ to 3 "

M.

For one powder. Four powders may be taken daily.

The Treatment of Gastralgia.—The *Riforma medica* for March 18th attributes the following to Hare:

R Chloral hydrate 3 grains;
Sodium hyposulphite 6 "
Peppermint water 60 "

M.

To be repeated as often as necessary on the occurrence of attacks. [Taking care as to the amount of chloral administered.—Ed. N. Y. M. J.]

An Antarthritic Powder.—The *Riforma medica* for March 20th gives the following formula:

R Benzene acid,)
Lithine carbonate,) each 15 part;
Sodium bicarbonate 20 "

M S: A large pinch to be taken before each meal

An Application for Urticaria.—Wolff (*Clinique de médecine de Bruxelles*, 1898; *Riforma medica*, March 21, 1899) gives the following as an American formula:

R Prepared calamine, $\frac{1}{2}$ each 6 parts;
Zinc oxide,
Carbolic acid 20 "
Lime-water 60 "
Rose water 130 "

M. For children, the proportion of carbolic acid should be reduced according to the age.

Ciaburri's Antichlorotic Pills.—According to Giofredi and Maramaldi (*Medico pratico; Clinica moderna*, March 15th), these pills are superior to Bland's. The formula is:

R Ferrous sulphate, $\frac{1}{2}$ each $1\frac{1}{2}$ grain;
Potassic carbonate, }
Quinine sulphate, } each $\frac{3}{4}$ "
Nux vomica, }
Arsenous acid 0.03 "

M.

Water Kefir: a Hygienic Drink for the Army.—The *Journal of the American Medical Association* for February 4th, citing the *Presse médicale* for January 7th, says that kefir made with milk is the constant beverage of the inhabitants of the Caucasus, and a modified kefir made with water, sugar, and kefir grains produces in six days a sparkling, refreshing drink containing 1.4 grammes alcohol, 16 of sugar, and 2.10 of carbonic acid to the litre, resembling cider in its appearance, with an acid, slightly vinous taste. The expense is less than a sou (about one cent) a litre, and Surgeon-Major Carteret, of the French army, has found it a most excellent and popular hygienic, tonic, and appetizing drink for the soldiers in his regiment. He observes that the kefir is not a good culture medium, and is therefore healthier than the water from which it is made. The formula is two litres of water to one litre of kefir grains and fifty grammes of brown sugar. Stir in an open pitcher. After three days, stir again, strain, and bottle, fastening the corks as for champagne. Drink, after three days in the bottle. The kefir grains can be used again and again, and if well dried can be put away to keep for months.

Amylene Chloral.—According to the *Journal de chimie et de pharmacie* (cited in the *Gazzetta medica lombarda* for February 15th), under certain conditions chloral and amylene hydrate combine to form dimethylethylcarbinol chloral, or amylene chloral, which is a colorless, oily liquid, of the specific gravity of 1.24, having the odor of camphor and a burning taste. It is insoluble in cold water, but soluble in hot water, splitting up into its component parts. It mixes in all proportions with alcohol, ether, acetone, and the fixed oils. It is a hypnotic, and, it is said, may be employed without inconvenience. The dose is not given.

The Rhinoceros, the Tiger, and the Stag as Sources of Drugs in Siam.—According to the *Gazzetta medica de Paris* for March 11th, the skin and horns of the rhinoceros, the claws, teeth, brain, and bile of the tiger, and the young antlers of the stag are highly esteemed as articles of the materia medica.

Calomel in the Treatment of Hæmorrhoids.—Dr. Kleivone (*Verh.*, 1899, No. 2, *Gazzetta de' ospedali e delle cliniche*, March 11th) recommends suppositories of five grains of calomel with a no better

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"CUPRIC ELECTROLYSIS" IN THE TREATMENT OF
OZÆNA.

PRECISELY what takes place in the process termed "cupric electrolysis" is not easy to explain or, for that matter, to understand. It is probable, however, that the chief occurrence, from the therapeutical point of view, is the formation of copper compounds which, owing to their nascent state, have medicinal virtues that one might seek for in vain in our ordinary preparations of copper. The procedure itself, as employed in the treatment of ozæna, is simple enough. A copper needle connected with the positive pole of a galvanic battery is inserted into the inferior or the middle turbinated body, another needle (of platinum or steel) connected with the negative pole is passed into the septum, and a current of from three to ten milliamperes is turned on and allowed to pass for about ten minutes.

In the March number of the *Edinburgh Medical Journal* Dr. P. M'Bride gives the history of this method of treating ozæna, which, originally suggested by Jonslain eight or ten years ago, has practically been confined to certain rhinologists of France and Belgium. Dr. M'Bride gives also his own experience with it, including short accounts of eight cases occurring in the out-patient service of the Royal Infirmary. Usually, he says, the patients complained but little of pain or of disagreeable after-effects, but in the case of a private patient there was a good deal of suffering from neuralgia, swelling of the eye, and general disturbance for a day or two. Four of the eight cases were practically cured—that is, the factor was done away with, although in most of the cases the atrophy remained—and the patients were free from trouble for periods as long as eighteen months. In one other case there was decided improvement; in another there was an apparent cure for some months, but then syringing had to be resumed; and in the two remaining cases there was improvement, but it lasted only for a few weeks. Like most other observers, the author noted that the application of electrolysis to one nostril alone often produced benefit, temporary or lasting, on both sides.

Dr. M'Bride is quite prepared to admit that the

results achieved in these cases may have been beyond what can reasonably be expected on an average; still, he says, they prove that in "cupric electrolysis" we have a valuable therapeutic resource, probably the most valuable that has yet been suggested, for ozæna.

PHANTOM TUMORS.

PHANTOM tumors, or "vanishing tumors," as they were termed at the meeting, were lately under discussion by the Harveian Society of London (*Lancet*, March 11th). One of the speakers, Dr. Leonard Guthrie, displayed considerable ingenuity in accounting for the occasional disappearance of tumors. Mr. Alban Doran had remarked that he had never known of a case of exploratory incision in which a real sarcoma or carcinoma was detected that had resulted in the least benefit to the patient. This was apropos of laparotomy in cases of tuberculous peritonitis.

Dr. Guthrie said he believed there were well-authenticated instances of the spontaneous disappearance of tumors, both malignant and benign. Tumors, he said, were dependent on their blood supply for their growth; if the supply was cut off, the tumor would waste. Possibly, he suggested, the success which occasionally attended the treatment of cancer with drugs depended on their action as vascular astringents. In the last century, he said, cancerous breasts were treated by the application of toads, which were supposed to suck the venom from the ulcers. Dr. Lauder Brunton had compared the action of phrynin, the active principle of the secretion of the toad's skin, to that of digitalis and erythrophlein [erythrophleine?], which were powerful vascular astringents. Phrynin had, moreover, a benumbing action on sensory nerves, like aconite; hence, though the remedy seemed absurd, it might possibly have been beneficial in some cases. A similar explanation might be offered of the effects of other drugs vaunted as cures for cancer, such as calcium carbonate, Chian turpentine, and cinnamon, which latter contained tannic acid. The success which sometimes followed oophorectomy for "inoperable" cancer of the breast was due possibly to the profound effect produced by that operation on the whole of the sympathetic system. Perhaps in such cases a local dilatation of vessels in a cancerous region gave place to a local constriction. The effects of strong mental emotion on the sympathetic should not be forgotten; they might account for the miraculous cures of cancer and other tumors at Lourdes and elsewhere. Dr. Guthrie expressed his conviction

that all methods of treatment based on these assumptions were at best uncertain and their effects but temporary, and they were available only in "inoperable" cases.

VAGINISMUS AND VULVAR HYPERÆSTHESIA.

In the *Lyon médical* for January 15th M. Jaboulay grouped under the name of pelvic neuralgia a series of subjective disorders affecting for the most part the uterus and the ovaries, but sometimes the external genital organs also, causing vulvar hyperæsthesia and vaginismus without any discoverable lesion, even in rebellious cases and those of long standing. Hysterectomy and oophorectomy, being grave and mutilating operations, are absolutely contraindicated in such cases, efficacious though they may be in some instances. In two very old and rebellious cases M. Jaboulay has succeeded in effecting a cure by excising the sacral chain of sympathetic ganglia or by dividing and tearing the anterior branches of the sacral plexus. This he accomplishes through an incision in the sacrococcygeal region.

In the same journal for January 22d M. Aubert, commenting on M. Jaboulay's communication, calls to mind one of his own, published about twenty years ago, in which were set forth the good effects of dilatation of the sphincters and stretching of the muscles. He mentions in particular the case of a young woman who, although four months married, had been unable to take part in coitus. Under anaesthesia, the vulvo-vaginal ring and the anus were widely dilated, and in a week complete sexual intercourse was accomplished with less pain than the patient had experienced during the former fruitless attempts at it. Impregnation occurred, and the woman's conjugal relations were thenceforward regular and normal.

We think M. Aubert is quite right in bringing the dilatation treatment forward again, not as a novelty of course, for he does not allege that it was original with him, but expressly states that the idea had been suggested several years before by Visca in a Paris thesis. M. Aubert explains the efficacy of the dilatation treatment by pointing out that nerves as well as muscles are stretched in the process, and he correctly maintains that it possesses the advantage of being quite within the power of any practitioner without special operative skill to carry out. To this it may be added that simple procedures are to be preferred to intricate operations in all but exceptional cases. We are speaking, of course, of cases unaccompanied by grave organic lesion or serious danger to life.

THE EFFECTS OF PROTRACTED INSOMNIA.

AN Italian physician, Dr. Giulio Tarozzi, of Pisa, has been studying the effects of enforced loss of sleep on four dogs (*Rivista di patologia nervosa e mentale*, January; *Indépendance médicale*, March 29th). The animals were watched night and day, and all possible means of rousing their attention and annoying them were taken to prevent their sleeping. Even at that, however, absolute insomnia was not secured, although practically the poor creatures were kept awake until death occurred. The fatal termination is described as taking place rather rapidly and as being preceded by a sudden and decided rise of temperature, followed by a gradual fall. The amount of sulphates and phosphates in the urine showed no characteristic change during the experiments; the chlorides were diminished in every instance during the few days preceding the animal's death. It is to be hoped that Dr. Tarozzi's results, meagre as they are, will be accepted without the repetition of so cruel an experiment, one well calculated, it seems to us, to play into the hands of those well-meaning but misguided people, the antivivisectionists.

A MEDICAL WOMAN ON THE CORSET.

AMONG the Paris theses for the year 1898-'99 is one by Mme. Tylicka entitled *Du corset, ses méfaits au point de vue hygiénique et pathologique*. From a brief summary in the *Gazette hebdomadaire de médecine et de chirurgie* for March 26th we learn that Mme. Tylicka lays stress upon the respiratory, circulatory, and digestive troubles that the corset produces in the long run. She would do away with it entirely, and substitute a waistcoat of heavy linen adjusted to the stature, reaching only to the waist, buttoned in front, and fortified with two whalebones on each side to sustain the breasts.

TYPHOID FEVER AS A CAUSE OF EPILEPSY.

A WRITER in the *Revue de médecine* for February, M. Dide, considers the part that may be played by typhoid fever in the aetiology of epilepsy. It appears from a summary of his article in the *Indépendance médicale* for March 29th that his observations go to show that typhoid fever not infrequently evokes epilepsy in persons of a neurotic predisposition, and, furthermore, that if it is severe enough it occasionally gives rise to epilepsy in those who are free from such a tendency, so far as can be ascertained.

A NEWBORN INFANT'S DEATH FROM UNAVOIDABLE NEGLECT.

M. PERRIN DE LA TORCHE recently related at a meeting of the Paris Society of Legal Medicine (*Indépendance médicale*, March 22d) a curious case of syncope during labor that came under his observation twenty-five years ago, one in which a judicial tribunal exercised well-deserved clemency based on a hint contained in his report as medical examiner. A poor seamstress, occupying lodgings that were rather isolated, was taken with labor pains, and not long afterward her neighbors found that her child was dead. An investigation had to follow. The story told by the forlorn mother, a weakly girl affected with Pott's disease, was that when labor had progressed so far that the child's head was distending the vulva with each pain she had seized her sewing

scissors and deliberately cut the perineum. And that was the last she remembered. When she regained consciousness, she found her baby between her thighs. She cut the umbilical cord, tied it, dried the child, and called in the neighbors. Then it was that the infant was found to be dead. Her story of her having incised the perineum was corroborated by an examination of the parts, but the rest of what she had to say seems to have been admitted as true on the strength of M. Perrin de la Touche's suggestion that she might have fainted immediately after making the cut—and well it may have been.

THE PRESENT STATUS OF THE CITY BOARD OF HEALTH'S COMMERCIAL OPERATIONS.

THERE are what we interpret as indications that, notwithstanding the defeat of the Collier bill, the board is inclined to recede from the stand it has taken in defiance of the great unwritten law that public money must not be used in competition with the citizen's capital and labor. The question of such competition, as we have said before, is not one with which the medical profession feels it its particular province to concern itself, but, since the board has thought fit to bring certain medical men's opinions to bear in support of its contention, it is quite in order, we think, for the profession at large to let it be known that the opinions thus employed by the board are not those entertained by the majority of physicians. If, as we surmise, the board is inclined to abandon its commercial operations, that inclination can in no way be more strengthened than by physicians' urging it. At the same time let it be urged that the board's appropriation should be made large enough to do away with the plea that the board has to fall back on sales of its products to eke out the resources required for its legitimate work.

THE FUNCTIONS OF THE LYMPHATIC GLANDS.

THERE is perhaps nothing particularly new in an article by M. Bezancon and M. Labbé (*Presse médicale*, February 15th; *Indépendance médicale*, March 29th), but it seems to us to be very well put. By its follicular system, they say, the normal lymphatic gland takes part in the formation of the leucocytes, and this function becomes heightened in activity when hyperleucocytosis is called for by an invasion of pathogenic germs. Moreover, the gland "does police duty" for the lymphatic vessels, attacking bacteria that have escaped the action of the leucocytes elsewhere and freeing the lymph from cellular and pigmentary debris.

ONE OF THE PENALTIES OF BEING FAMOUS.

THE Paris *Figaro*, speaking of the case of a literary woman, Mme. Séverine, on whom a successful operation was recently performed in a sanitarium by Dr. Pozzi, "professeur agrégé à la Faculté de médecine, chirurgien de l'hôpital Broca, sénateur de la Dordogne," intimates that it is destined to become celebrated because the president of the French Republic sent to inquire how the patient was getting along. The *Gazette médicale de Paris* for March 25th alludes to the newspapers' accounts of the case, and takes occasion to print a wretched portrait of the lady and an almost equally wretched one of Dr. Pozzi. Verily we have no monopoly of "yellowness" in the United States.

INFLUENZA AND DISEASE OF THE VERMIFORM APPENDIX.

THAT an attack of influenza sometimes plays a part in engendering appendicular inflammation is admitted by many observers, but few are prepared, we imagine, to go so far as M. Faisans went recently when he declared at a meeting of the Medical Society of the Hospitals (*Indépendance médicale*, March 29th) that influenza was the real cause of disease of the appendix. He based his assertion chiefly on the alleged increased frequency of appendicular disease during the last twelve years, a period characterized by frequent epidemics of influenza. An outbreak of influenza, he said, was sure to be accompanied or followed by the occurrence of numerous cases of inflammation of the appendix.

THE SO-CALLED EUNUCHS OF AUSTRALIA.

A PRACTICE said to prevail among the aborigines of Australia may perhaps be set down as an improvement upon the artificial establishment of barrenness in women in cases in which procreation is undesirable. Dr. Hösbert (*Janus; Lyon médical*, March 19th) states that boys approaching the age of puberty are subjected to an incision that results in a urethro-perineal fistula, and the result is that when they copulate the seminal fluid is apt to stop short of the vagina. The procedure is not radical, but it has its merits.

ARTIFICIAL SERUM IN THE TREATMENT OF TYPHOID FEVER.

THE typesetters of Florence seem to have taken special interest in the treatment of typhoid fever lately, as the result of an epidemic affecting the members of their craft. Accordingly, under the auspices of the Florentine Typographical Society, Dr. Giglioli and Dr. Calvo (*Giornale internazionale delle scienze mediche*, March 15th) have tried subcutaneous injections of artificial serum in that disease, in all stages, with palliative but not curative results. Perhaps the use of a physiological solution of salt would have answered as well.

MEDICAL SUPERSTITIONS.

THE *Clinical Reporter* for March, quoting the *Boston Medical and Surgical Journal* of uncertain date, gives a list of popular superstitions on medical subjects. It is just possible that some of these superstitions may enshrine a grain of truth, as, for instance, that said to be prevalent in Massachusetts, that "pregnant women must avoid the smell of paint, or they'll miscarry." We have heard a good deal of late about lead as an abortifacient; may there not be some real basis of truth in the superstition? We have only to consider the amusement with which years ago we used to read the ancient "pharmacopœias" issued by prominent physicians—*e. g.*, that of Dr. Salmon published some two centuries or so ago—particularly in regard to what is now known as opotherapy, to realize that empirical though their knowledge was, their crude methods had after all a basis in scientific truth. Instead of deriding these superstitions wholesome, would not the wiser part lie in a careful examination of them with a view to extracting such grain as may be concealed in the chaff? As an instance, in Salmon's pharmacopœia before referred to, crushed

spiders are given as a remedy for "fever and ague." Within recent times arachnidine has been vaunted as a remedy for intermittent fever; and, although it has failed to fulfill all that was expected of it, there can be no doubt that it does possess antiperiodic properties.

DANGER IN THE KINEMATOGRAPH.

It is not, perhaps, generally known that the celluloid rolls used in the kinematograph are not only inflammable but, under certain circumstances, also explosive. The *Lancet* for March 11th comments on a serious accident which recently occurred in a London theatre, due to some defect in the electric wires, causing the film to explode, wrecking the apparatus, terribly burning the electrician, and burning the clothes of a bystander, who, however, was fortunate enough to escape personal injury. Had the accident occurred, as the *Lancet* very justly points out, in a full house, instead of only during a rehearsal, it requires no great stretch of imagination to suppose that in all probability a panic would have ensued, proving infinitely more disastrous than the direct effects of the explosion. The increasing use of the kinematograph in places of public amusement—and it is undoubtedly a valuable adjunct not only to amusement but also to instruction—renders it highly desirable that some effective supervision should be exercised over such presentations to minimize the risk of accidents. Could not all such performances be licensed by the fire department, who should undertake the work of supervision, as elevators are constantly overhauled to lessen the risk incident thereto?

THE OUTSIDER'S VOLUNTEERED PAPER.

We may be permitted to throw out the suggestion that the medical societies that meet only once a year would be doing their members justice and themselves as organizations credit if they were to ignore the non-member who volunteers to present a paper. It is undoubtedly conducive to the success of a meeting if by invitation a person of weight in the profession takes part in it to the extent of reading a paper and joining in the discussions; but this is not what we have in mind. Such persons do not offer to read papers. The man who does is only too apt to be one who seeks to advertise himself. But, whether he is of that sort or not, he takes up time that properly belongs to the members. We all know that the programme of such a meeting is generally of undue length, so that justice can not be done to it. Papers often have to be presented only in abstract or even by title, on account of lack of time for their adequate presentation and discussion; and this glutting of the programme is intensified by the admission of papers proffered by outsiders.

THE RENAISSANCE OF MINOR GYNÆCOLOGY.

The time seems to be at hand in which a physician who ministers effectively in the field of gynæcology will receive some credit from the laity without need of being known as a laparotomist. For a time of years, minor operations, often, it is to be feared, undertaken with but slight reason, have swamped all other services in this field, in the estimation of patients and their friends. The change that appears to be coming will be in the interest of sound and conservative practice, and is to be welcomed.

WINE OF CINCHONA AS A TIPPLE.

WINE of "calisaya," as it is commonly termed by its hypocritical consumers, is doubtless taken steadily and in great measure stealthily as a tippie. In the *Tribune médicale* for March 29th Dr. A. Baratrier declares that this species of tipping is far more prevalent than is commonly supposed, and he points out what he considers some of its particular dangers, not the least of which is connected with the bad quality of wine often employed in concocting the preparation.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending April 8, 1899:

DISEASES.	Week ending Apr. 1.		Week ending Apr. 8.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	8	6	19	7
Scarlet fever.....	173	16	156	11
Cerebro-spinal meningitis.....	0	11	0	10
Measles.....	259	12	267	14
Diphtheria.....	175	56	185	29
Croup.....	22	8	12	9
Tuberculosis.....	251	156	159	166
Small pox.....	1	0	2	0
Chicken-pox.....	27	0	21	0

Aristotle Once an Apothecary.—The *Bulletin of Pharmacy* for April says that, in a discussion on "aloes" before the Pennsylvania Pharmaceutical Association, Dr. A. W. Miller remarked that the first intimation of obtaining this drug, and supplying it originally to invalids, was due to the investigation of a former druggist. "Aristotle," he said, "at one period of his life, kept a drug store in Athens, before he became one of the most eminent philosophers of Grecian antiquity. After he had spent his patrimony in the pursuits of liberal studies, he opened a drug store in Athens; and subsequently, on account of the renown that had followed his labors, he became the tutor of Alexander. When Alexander found no further worlds to conquer, Aristotle suggested to him that he had not yet secured possession of Sumatra [Socotra?], the most precious isle of the ocean, and the one which produced the most valuable aloes."

We may add that the *Ethics* of Aristotle is better known than his connection with aloes; there are, however, in these days druggists, and doctors, too, for that matter, whose aloes is much better known than their ethics.

Science and Courtship. A writer, dating from Umeåborg, Finland, writes to the *London Sporting Times* for March 18th, saying that he thought the following advertisement, translated from a local Swedish paper, might interest that journal:

"A rich young merchant is looking for an intelligent lady with good health, as a companion for life. Replies addressed to B will only be taken notice of if accompanied by a portrait, an X-ray picture, and a photo of the interior of the stomach."

The writer adds: "You will notice we are very particular in Finland."

Here is a hint for some of our "stand farm" marriage legislators.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general of the United States Marine-Hospital Service for the week ending April 8, 1899:

Small-pox—United States.

Mobile, Ala.	Mar. 24-26	3 cases.	
Washington, D. C.	Mar. 31-Apr. 5	6 "	
Jacksonville, Fla.	Mar. 25-Apr. 1	1 case.	
Key West, Fla.	Mar. 24-29	3 cases.	
Chicago, Ill.	Mar. 24-31	3 "	
Alexandria, La.	Mar. 29	9 "	
New Orleans, La.	Mar. 25-Apr. 1	65 "	2 deaths.
Baltimore, Md.	Jan. 18-Apr. 1	12 "	1 death.
Beaver County, Pa.	Mar. 12-30	1 case.	
Bedford County, Pa.	Mar. 12-30	1 "	
Fayette County, Pa.		15 cases.	
Somerset County, Pa.		1 case.	
Alexandria, Va.	Mar. 31-Apr. 2	1 "	
Newport News, Va.	Mar. 27-Apr. 1	20 cases.	
Norfolk, Va.	Mar. 25-31	33 "	
Portsmouth, Va.	Mar. 25-31	27 "	1 "
Spokane, Wash.	From first appearance to Mar. 28		4 deaths.

Infection from Los Angeles, Cal.

Small-pox—Foreign.

Bahia, Brazil.	Mar. 4-11	2 cases.	
Rio de Janeiro, Brazil.	Feb. 17-24	2 "	1 death.
Hongkong, China.	Feb. 4-11	2 "	1 "
Hongkong, China.	Feb. 11-18	3 "	1 "
Seoul, Korea.	Feb. 25	Epidemic; many cases and many deaths.	
Cairo, Egypt.	Feb. 18-Mar. 11		3 deaths.
Liverpool, England.	Mar. 11-18	1 case.	
London, England.	Mar. 11-18	1 "	
Paris, France.	Mar. 11-18		1 death.
Athens, Greece.	Mar. 11-18	7 cases.	3 deaths.
Calcutta, India.	Feb. 18-25		1 death.
Madras, India.	Feb. 24-Mar. 3		2 deaths.
Mexico, Mexico.	Mar. 19-26	8 "	3 "
Nagasaki, Japan.	Feb. 27-Mar. 6	1 case.	
Moscow, Russia.	Mar. 4-11	18 cases.	2 "
Odessa, Russia.	Mar. 11-18	3 "	
St. Petersburg, Russia.	Mar. 11-18	5 "	1 death.
Constantinople, Turkey.	Feb. 27-Mar. 6		11 deaths.
Constantinople, Turkey.	Feb. 6-13		18 "
Smyrna, Turkey.	Feb. 26-Mar. 5		1 death.
Yambo, Turkey.	Mar. 29	Small-pox raging.	

Yellow Fever.

Bahia, Brazil.	Mar. 4-11	4 cases.	2 deaths.
Rio de Janeiro, Brazil.	Feb. 17-24	65 "	41 "
Vera Cruz, Mexico.	Mar. 22-30		2 "

Cholera.

Calcutta, India.	Feb. 18-25	25 deaths.
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Plague.

Calcutta, India.	Feb. 18-25	12 deaths.
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The West London Medico-chirurgical Society.—The *British Medical Journal* announces that Dr. William Osler will deliver the Cavendish lecture before the society on June 13th.

The Buffalo Academy of Medicine. At the last regular meeting, on Tuesday evening, the 11th inst., the following papers were read: Hereditary Syphilis, by Dr. A. E. Dicht; and Nasal and Cranial Diseases, by Dr. William C. Krauss.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 8th inst., the following papers were presented for discussion: A Case of Tetanus following Vaccination, by Dr. F. E. Chase; and Unconquered Crêpe and its Use in a Case of Septicæmia Post abortum, by Dr. Hugo Sumner.

The Richmond Academy of Medicine and Surgery.—At the last meeting, on Tuesday evening, the 11th inst., Dr. J. Travis Taylor opened the discussion with a paper on Erythema Scarlatinoïdes.

The Collier Antitoxine Bill Defeated.—We learn that this bill was last week thrown out by the New York Senate.

Changes of Address.—Dr. Albert H. Buck and Dr. Robert Lewis, Jr., to No. 48 West Fortieth Street, New York; Dr. Schmitz, to No. 6352 Monroe Avenue, Chicago.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 1 to April 8, 1899:*

APPEL, AARON H., Major and Surgeon, will proceed to Galveston, Texas, for muster out of the First Texas Infantry.

BRATTON, THOMAS S., First Lieutenant and Assistant Surgeon, will proceed to Savannah for duty.

CLENDENIN, PAUL, Major and Chief Surgeon of the United States Volunteers. The order honorably discharging him is revoked, and he is relieved as chief surgeon, Second Division, Seventh Army Corps. He will then proceed to Santiago as commanding officer of the general hospital there.

COFFIN, HAROLD L., Acting Assistant Surgeon, will proceed from Washington to Jefferson Barracks, Missouri, to accompany Light Battery E, First Artillery, to Manila.

DOLZ, WILLIAM, Major and Brigade Surgeon, is honorably discharged, to take effect April 5th.

DRAKE, C. M., Acting Assistant Surgeon, will proceed to Jefferson Barracks, Missouri, to accompany Light Battery E, First Artillery, to Manila.

FITZPATRICK, CHARLES, Acting Assistant Surgeon, will report to WAKEMAN, WILLIAM J., Major and Brigade Surgeon, attending surgeon and examiner of recruits in Philadelphia, for duty as his assistant in the medical examination of recruits.

GARDNER, EDWIN F., Major and Surgeon, is detailed as a member of a board appointed to meet at Denver for examination for promotion.

GIRAUD, ALFRED C., Lieutenant-Colonel and Chief Surgeon, will proceed to the Presidio of San Francisco.

HARVEY, PHILIP F., Major and Surgeon, is detailed as a member of the examining board appointed to meet at St. Paul, *vice* TILTON, HENRY R., Lieutenant-Colonel and Deputy Surgeon-General.

HYDE, L. W., Acting Assistant Surgeon, will proceed to Hartford, Connecticut, and report to HOWE, WALTER, Captain, Fourth Artillery, for duty.

LLOYD, CYRUS D., Acting Assistant Surgeon, is detailed as a member of the examining board appointed to meet at Fort Leavenworth, Kansas, *vice* TOBNEY, GEORGE H., Major and Surgeon.

MUNN, CURTIS E., Major and Surgeon, is detailed as a member of the board appointed to meet at Denver for examination for promotion.

PERSONS, ELBERT E., Acting Assistant Surgeon, will proceed to Governor's Island, N. Y., for assignment with Batteries L and M, Fifth Artillery, and accompany these batteries to Manila.

SIMS, GEORGE K., Acting Assistant Surgeon, will accompany the battalion, Sixth Artillery, to Honolulu.

TAYLOR, RALPH L., Acting Assistant Surgeon, is relieved from the Department of Pinar del Rio, and will proceed to New York for assignment to duty on a government transport.

Society Meetings for the Coming Week:

MONDAY, April 17th: New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, April 18th: New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Passaic, N. J., County Medical Society (annual); Baltimore Academy of Medicine.

WEDNESDAY, April 19th: Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Middlesex, Massachusetts, South District Medical Society (annual—Waltham); Windham, Connecticut, County Medical Society (annual—Plainfield); Philadelphia County Medical Society.

THURSDAY, April 20th: New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Tolland, Connecticut, County Medical Society (annual); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, April 21st: New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynaecological Society.

Births, Marriages, and Deaths.

Married.

BAKER—CHEATHAM.—In Louisville, Kentucky, on Wednesday, April 5th, Mr. James Reed Baker and Miss Elizabeth Van Dyck Cheatham, daughter of Dr. William R. Cheatham.

BROWN—CHASE.—In Scranton, Pennsylvania, on Wednesday, April 5th, Dr. Harry MacVeagh Brown and Miss Olive MacIntosh Chase.

DAVIS—CARTER.—In New York, on Thursday, April 6th, Dr. Charles E. Davis, of Albany, and Mrs. Mary Scott Carter.

DEANE—LOWME.—In Plainfield, New Jersey, on Wednesday, April 5th, Mr. Julian S. Deane and Miss Maude Myra Lowrie, daughter of Dr. Henry H. Lowrie.

EMMETT—ASHMAN.—In New York, on Thursday, April 6th, Dr. Frank Newcomer Emmett, of Haverstown, Maryland, and Miss Lillian De Forest Ashman.

PINCUS—LAYMAN.—In New Orleans, on Tuesday, April 11th, Dr. Sidney E. Pincus, of Memphis, and Miss Gussie Layman.

SMITH—FRIEDERICH.—In Syracuse, N. Y., on Wednesday, April 5th, Dr. Andrew F. Smith and Miss Annie Cooper Friederich.

SULLIVAN—WADSWORTH.—In Boston, on Saturday, April 8th, Mr. T. R. Sullivan and Miss Lucy Wadsworth, daughter of Dr. Oliver F. Wadsworth.

VAN NOSTRAND—SMITH.—In New York, on Thursday, April 6th, Dr. William Van Nostrand and Miss Anna Leone Smith.

WADE—KNIGHT.—In Boston, on Wednesday, April 5th, Mr. George K. B. Wade and Miss Theodora Irving Knight, daughter of Dr. Frederick Irving Knight.

Died.

BOWEN.—In Boston, on Friday, April 7th, Dr. Seranus Bowen, in the sixtieth year of his age.

CHESEBOROUGH.—In Summit, N. J., on Thursday, April 6th, Dr. Nicholas Cheseborough, in the seventy-eighth year of his age.

NELSON.—In Danville, Virginia, on Thursday, April 6th, Dr. William Nelson.

RIVES.—In Washington, D. C., on Sunday, April 2d, Dr. Wright Rives, United States Army, in the twenty-seventh year of his age.

RUTHERFORD.—In Houston, Texas, on Friday, March 31st, Dr. Robert Rutherford, in the sixtieth year of his age.

Letters to the Editor.

THE TERM SYCOSIS.

126 EAST TWENTY-NINTH STREET, NEW YORK, April 1, 1899.

To the Editor of the New York Medical Journal:

SIR: The article of Dr. Regensburger, of which you speak in to-day's editorial of your most excellent journal, may be highly interesting, as you say, but his proposal of the term *dermatitis barbe* is a most unfortunate one. First of all, it is a hybrid term, and, secondly, it is impossible; we might as well speak of *dermatitis of the straw hat*. The synonymous term in existence already, *acne mentagra*, although hybrid, is after all preferable to *dermatitis barbe*.

A. ROSE, M. D.

*** We recognize, of course, that *dermatitis* is Greek and *barbe* is Latin, but hybridity, as we understand it, is a quality only of single words constructed from more than one language. As to our correspondent's other objection, what would he say of *hydrocele of the trousers*?

A PHYSICIAN IN DISTRESS.

161 WEST ONE HUNDRED AND TWENTY SECOND STREET,
NEW YORK, April 2, 1899.

To the Editor of the New York Medical Journal:

SIR: The unusual circumstances pertaining to the case I present to you seem a fitting excuse to solicit your cooperation in obtaining relief for a physician who is in sore distress. Dr. Edward von Bonhoff some three years ago was taken ill, and from his disease was left deformed for life, and is now a homeless object of charity. His unfortunate wife is in an asylum hopelessly incurable, and his two children are in the care of friends.

I have been requested to hold a fund subscribed by some medical gentlemen, but the amount collected has been so small that it is now exhausted, keeping his body and soul together during the winter. We hoped to collect a sufficient amount to enable the doctor to sail for Honolulu, where he has some friends and where, under a tropical and equable climate, he would soon support himself despite his physical condition, for he is highly

educated, speaking the German, Spanish, and Danish languages.

Whoever is generously inclined to assist may send contributions to the undersigned.

M. C. O'BRIEN, M. D.,
Ex-Recording Secretary of the New York County
Medical Association.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XIV.

RIGHTS AND LIABILITIES OF THIRD PARTIES.

(Continued from page 502.)

Post-mortems at Coroner's Inquest.—The right of the physician to recover from the county for services in making a post-mortem examination when summoned for that purpose by the coroner is in many States regulated by statutes which vary not only in their form of expression but in the substance of their provisions as well, and which are the subject of such frequent change as to render an extended examination of them of no lasting value. The common-law liability of the county and also the meaning of many of these statutes have been the subject of judicial examination on numerous occasions and, as these cases serve to illustrate the policy of the law with regard to the compensation of physicians for this class of services, they are examined to some extent.

Upon the common-law liability of the county for the physician's fee for services at a coroner's inquest the supreme court of Arkansas, in a recent case, expressed itself as follows: "The statute makes it his (the coroner's) duty to use *all proper means* to ascertain the truth concerning the death of the person over whose body he is required to hold an inquest. It sometimes occurs that the cause of death can only be ascertained by skillful physicians, and by them only by making an autopsy. How can the coroner discharge the duty imposed on him in such cases? He may summon the physician to testify and compel him to swear to his opinion on a superficial view of the body, but can not compel him to touch it, or do the more nauseous and dangerous work of opening it, because such an act is not within the office of a witness. The coroner is not expected or required to make the autopsy with his own hands. It is not within the line of his official duties, and no fee is allowed for such work, for the reason stated. Yet he is authorized to ascertain the truth concerning the death. The conclusion is unavoidable: he must in such cases employ a physician to make the autopsy and ascertain the cause of death, as in that case it would be the only proper means by which the truth could be ascertained." Commenting further upon the liability for the payment of the physician's fees for such operation, the court says: "Is he (the coroner) or the county responsible for the services of the physician? . . . Such services, though ancillary to the purpose of some inquests, are not official, and consequently were not considered by the legislature when it fixed the fees of

coroners. But there is not only no fee fixed, but no fund set apart to the coroner for such expenses. To hold, then, that he is responsible, under such circumstances, would be to require him to contribute so much gratuitously to the administration of justice and to the enforcement of the laws. . . . Such a requirement would be unjust and oppressive, and contrary to the spirit of our laws. As a rule, the counties are responsible for the expense of the administration of criminal laws. Both justice and policy demand an adherence to the rule in this case, and that the county should pay a reasonable compensation for such services when needed and performed—that is to say, what they are reasonably worth."*

This case is cited with approval and followed in a later Arkansas case decided in 1895.† In 1865 the supreme court of New York held that where a physician was employed by a coroner to perform a post-mortem examination at the inquest, with no special agreement that he should receive his compensation from other source than the coroner, his only recourse was to compel that official to pay his fee; but that the coroner had the right to recover from the county the amount paid to a physician in such a case.‡ The legislature, however, passed an act in 1874 making the physician's fee in such a case a direct charge against the county. Since the passage of this act the physician must look to the county for his pay, as the coroner is released from this liability.§

In California the liability of the county for the payment of the physician's services in making post-mortems is recognized, but the legislature has enacted a law providing that "the board of supervisors must not hear or consider any claim in favor of an individual against the county unless an account, properly made out, giving all the items," is presented to the board. A claim of a physician which was properly verified by the coroner was presented to the board for allowance. The account was for "making a trip from Petaluma to Timber Cove, and making a post-mortem examination of the body of —, and taking the stomach of said deceased to San Francisco for analysis." This account was held not to fulfill the requirements, as it did not give "all the items." It should have given the number of miles traveled in going from Petaluma to Timber Cove, and the length of time consumed in making the post-mortem examination; also the number of miles traveled, the time consumed, and the expense incurred in taking the stomach to San Francisco for analysis.||

In Colorado the right to collect from the county is fixed by statute, which provides that where the "jury shall deem it requisite," the coroner may summon one or more physicians, and may allow a reasonable compensation subject to the confirmation of the board of county commissioners. The wording of this statute does not, however, render it incumbent upon the physician, when summoned, to inquire whether or not the jury deemed it requisite to make such an examination. It is his duty when so summoned to obey the summons, and he has a right to assume that the coroner acted

* St. Francis Co. vs. Cummings, 55 Ark., 419.

† Clark Co. vs. Kerstan, 60 Ark., 508; 30 S. W. Rep., 1016.

‡ Van Hovenbergh vs. Hasbrouck, 15 Barb., 197.

§ People vs. Board of Supervisors, 38 N. Y. S. R., 964; 15 N. Y. Supp., 680.

|| Christie vs. Board of Supervisors of Sonoma Co., 60 Cal., 164.

correctly in summoning him, and to rely upon such official act.*

In Indiana the liability of the county has been recognized for many years. The supreme court said in 1852: "We have no doubt that in a case where a post-mortem examination is really necessary the coroner may, by his employment, bind the county to the payment for a sufficiency of professional skill to make the examination. To that extent, at least, he must be the agent of the county."† The matter is now regulated in the State by statute, which provides that when a surgeon or physician is required to attend an inquest held by a coroner, and make a post-mortem examination, the coroner shall certify such service to the board of county commissioners, who shall order the same paid out of the county treasury. The fact that an inquest is conducted by a justice of the peace, who is there authorized to perform all the duties of a coroner, and the physician employed and the certificate of services made out by the justice, does not in any way affect the liability of the county to pay the physician for such services.‡ Nor does it release the county from their liability in the premises because the physician is in the employ of the county to treat the poor of the asylum, nor even where the subject operated upon was during his life a pauper whom it was the physician's duty to treat when sick." Incident to the coroner's duty to hold inquests is his right not only to employ a physician to perform a post-mortem examination, but also his right to determine who that physician shall be. In the case of the Board of Commissioners of Dearborn County vs. Bond, the county commissioners employed a physician to render such services, and when the coroner refused to recognize their selection, but employed another physician and certified to his claim, the board of county commissioners refused to allow the same. The matter was appealed, and finally reached the supreme court, where the claim was allowed. Justice Best said: "This duty is imposed upon the coroner, and for the purpose of enabling him to discharge it he is empowered to employ such means and to select such physician or surgeon as in his judgment will enable him to ascertain the cause of death. The duty thus imposed necessarily confers the authority to make his own selection in the faithful discharge of his duties, and, in this respect, he can not be superseded by the board of commissioners, upon whom no such duty rests."§

There is in Indiana, by virtue of a statute, a limited exception to the general rule of liability of the county—thus: where money and other valuables are found upon the body of the deceased this property is first subjected to the payment of the expenses of the inquest.¶

The statute law of Iowa relative to the subject provides that "when he (the coroner) or the jury deem it requisite, he may summon one or more physicians or surgeons to make a scientific examination, who, in stead of witness fees, shall receive such reasonable compensation as may be allowed by the county board of supervisors."§ Under this law the amount allowed be

the county board is conclusive and can not be increased upon appeal unless fraud can be shown in fixing such amount.*

In Pennsylvania the courts hold that the coroner has the power at common law to employ a physician to perform an autopsy and to bind the county for the physician's pay. The physician when summoned is under no obligation to investigate and determine whether the inquest should be held; this is a matter left to the discretion of the coroner, and the physician may safely rely upon the mere fact that he is summoned.† Nor have the county commissioners the right to appoint a regular physician to perform such services, thereby precluding the coroner from making his own selection.‡

Upon the question of the liability of counties for the payment of the fees of physicians for performing post-mortem examinations at coroners' inquests, the courts of the State of Texas seem to stand alone. The supreme court in 1888 held that there was no such liability at common law, and that there was no statute in the State fixing such liability upon the counties.¶ Again, in 1891, the same court refused to permit a physician to recover the amount of his reasonable fee with the laconic statement: "The law permits no recovery for the services rendered."|| This construction of the law being for the second time brought to the attention of the profession by the highest court of the State, they evidently realized its injustice, and, taking the advice of the court in the case of *Fears vs. Nacogdoches County*, sought relief through legislative enactment. At the next session of the legislature, which convened on January 10, 1893, a law was enacted authorizing coroners to call in the county physician; or, if impracticable to secure his services, to summon any regularly practising physician to perform a post-mortem, and providing that the county in which such inquest is held shall pay the physician a fee of not less than ten dollars or more than fifty dollars, the excess over ten dollars to be determined by the county commissioners' court after ascertaining the amount and nature of work performed in making such autopsy.¶

Liability of Employer for Neglect, etc., of Physician.

—The liability of third parties, as contemplated heretofore in this chapter, is only that which arises in favor of the physician. Questions frequently arise as to the liability of third parties to the patient, based upon the transactions between the physician and patient. While such questions are not of direct interest to the physician, it is thought best to give them brief attention.

Employers, such as railroad companies, steamboat companies, mining companies, and the like, very frequently employ physicians to treat their wounded or sick employees; in case of negligence or malpractice of the physician, it has been a very common occurrence for the injured employee to sue his company to recover damages for the injury or loss suffered by him by reason of such negligent or improper treatment by the employer's physician or surgeon; but it is now a well-settled proposition of law that the employer is not liable for the improper treatment by a surgeon in such a case. The relation between the employer and physician

* *Co. Commrs. Pueblo Co. vs. Marshall et al.*, 11 Cal., 84, 10 P. Rep., 837.

† *Gaston vs. Board Commrs. Marion Co.*, 3 Ind., 497.

‡ *Stevens vs. Board of Commrs. Harrison Co.*, 46 Ind., 541.

§ *Long vs. Board of Commrs. Perry Co.*, 121 Ind., 1, 3.

¶ *Board of Commrs. of Dearborn Co. vs. Bond*, 88 Ind., 10.

§ *Rev. St. 1897*, § 8711.

§ *Code of Iowa*, § 599. *McClain's Code*, § 592.

* *Moser vs. Boone Co.*, 25 N. W. Rep., 3, 1 Tex.

† *County of Northern pt. vs. Tex.*, 9 P. St., 154.

‡ *County of Allegheny vs. Sherr*, 1 P. St., 101.

¶ *Fearns Nacogdoches County vs. Tex.*, 10 S. W. Rep., 265.

|| *Frio Co. vs. Earnest*, 16 S. W. Rep., 1, 2 Tex.

§ *Laws of Tex.*, 1893, 172.

or surgeon is not that of master and servant, which in the law implies that the servant acts under and according to the instructions of the master. In the case of employer and physician the very nature of the physician's duties precludes the possibility of this relation, as the physician is bound to exercise knowledge, skill, and judgment, and it is because he is capable of this that he is selected. It therefore follows that the employer is not responsible to his employees for the manner in which they are treated by the physician or surgeon whom he procures for them.* The law does, however, require that the employer use reasonable care in selecting a physician and surgeon of ordinary skill, otherwise he might be liable to his employee for his own negligence in making a careless selection.†

Nor is a county or other municipal corporation liable to a patient for unskillful or improper treatment by a physician while in the county hospital or similar institution.‡

While the liability of the physician to the patient can not properly be discussed under the present chapter, it is thought pertinent to state that the immunity of the third parties in the cases just referred to does not in any way relieve the physician from his liability to the patient.‡

NOTE.—The author of these articles is indebted to the *Medical and Surgical Monitor*, issue of March 15th, p. 98, for an excellent synopsis of the recent medical acts of Indiana, referred to in the letter of Dr. A. J. Miller, of Columbus, O., which was published in the *Journal* on February 18th, p. 243.

The *Monitor* says: "The medical laws in Indiana were passed in 1816, 1885, 1891, and 1897, respectively; the latter was amended March 3, 1899."

The substance of these laws as they now stand the *Monitor* presents as follows: "The applicant must be a bona fide resident of the county and State. Two freeholders must make affidavit as to the moral character of the applicant, and to the identity of the applicant and the person mentioned in the diploma. The State board of medical registration and examination will examine the same, and, if satisfactory, issue its certificate; then the county clerk is authorized to issue a license to practise medicine, surgery, and obstetrics within the State of Indiana. In case of change of residence this license may be filed with the clerk of another county and a new license obtained. A license will permit its owner to practise in any county in the State, but it must be from the clerk of the county in which the applicant resides. If there be a change of residence, however, a new license must be obtained. In case a diploma is not considered worthy of recognition, the applicant is given an opportunity to pass an examination."

While the Indiana decisions, illustrated in Article IV, requiring the physician to have a license in each county into which his practice extends, are superseded in that State by the new statute, they may still be regarded as authoritative precedents for the interpretation of statutes in sister States similar to the one which they construed.

(To be continued.)

* A. T., and S. F. R. Co. vs. Zeiler, 54 Kan., 340; 38 P. Rep., 282; O'Brien vs. Steamship Co., 151 Mass., 272; South Fla. R. Co. vs. Price, 32 Fla., 46; 13 So., 638; Richardson vs. Carbon Hill Coal Co., 10 Wash., 618; 39 Pac. Rep., 35; Quinn vs. Kansas City, M., and B. R. Co., 91 Tenn., 713; 28 L. R. A., 552; 30 S. W. Rep., 1036; Union P. R. Co. vs. Artz, 69 Fed. R., 366; 23 L. R. A., 581; York vs. Chicago, M., and St. P. Ry. Co., 67 N. W. Rep. (I.), 571; Clark vs. Union P. R. Co., 29 Pac. Rep., 1138 (Kan.); Pittsburgh, C. C., and St. L. R. Co. vs. Sullivan, 40 N. E. Rep., 138 (Ind.).

† Landheim vs. De-K., N. S. Co., 107 N. Y., 238.

‡ Sherbourne vs. Yuba Co., 21 Cal., 113; Brown vs. Vinlanden, 65 Me., 192; Summers vs. Davison Co., 105 Ind., 267; 4 West Rep., 217.

* In Deane vs. Ducker, 130 N. Y., 325; 24 L. R. A., 129.

Pith of Current Literature.

Rebreathed Air as a Poison per se.—Dr. John Hartley (*Lancet*, September 17, 1898; *Journal of Laryngology, Rhinology, and Otology*, April, 1899) says that the modern treatment of phthisis is made up of three essential factors: 1. The discontinuance of the supply of bacilli from without. 2. The abundance of nutritive material for the tissues. 3. The supply of an abundance of fresh air uncontaminated by the products of respiration. This seems to mean that the tissues, if not too enfeebled, may be trusted to deal with the bacilli already present if their metabolism is kept going at high pressure. Rebreathed air and sewer gas should not be looked upon as mere carriers of accidental poisons, but as poisons *per se*. Hence the writer enters a strong plea for thorough ventilation—a different thing from the small trickle of air supplied by the tiny "ventilators" which are so hopelessly inadequate.

Pieric Acid in Membranous Enterocolitis.—The *Revista de Anatomia patológica y Clínica* for February 1st and 15th, citing the *Gaceta medico Catalana*, recommends that in the morning, before breaking fast, a quart of borated water should be used for a lavage, to remove accumulated matter and to dislodge from the intestinal wall the adherent membranous concretions. After the bowels have moved, a quart injection containing a teaspoonful of the following fluid should be injected:

R Pieric acid 15 grains;
Distilled water 180 "

M.

This last injection should be retained. The pieric acid used in this way directly antagonizes the lesion, quickly modifying the altered epithelium.

The Incubation Period of Measles.—Dr. James C. Wilson (*Dunglison's College and Clinical Record*, March 15th), lecturing on a case of typhoid fever, said that the most interesting thing about the case was that the patient stated that he was placed in an ambulance with a man suffering with measles, which he himself had never had. As a result he got another infection which ran its course independently of the fever. It was generally difficult, said Dr. Wilson, to fix definitely the period of incubation in these infective diseases, but here was a case in which the time of exposure was definitely known. On the thirteenth day after exposure the first symptoms of measles were noticed, and on the fifth day following the rash appeared, or eighteen days after the first exposure. In the text-books the time was variously stated at from seven to fifteen days; this case, taking the weakened condition of the patient into consideration, pointed to the longer period as being the more likely. As to the character of the rash, it was his belief that the character of the skin determined its intensity rather than the severity of the disease; in cases where the skin was of a sensitive, easily irritated nature the eruption was more marked than in less susceptible integuments.

The Transplantation of Nerves.—Dr. Reuben Peterson (*American Journal of the Medical Sciences*, April) thus concludes an inaugural thesis read before the Chicago Academy of Medicine:

"1. Transplantation of a peripheral nerve segment to bridge over a gap between the two ends of a resected

nerve is a legitimate surgical procedure. 2. Under favorable conditions at least partial, and at times complete, restoration of sensation and motion may be expected to follow the operation. 3. Regeneration of the degenerated peripheral end is due to down-growths from the axis cylinders of the central end. 4. From the slowness of this process the longer the time after operation the more favorable will be the results. 5. Sensation may return very early after operation, and, as a rule, precedes return of motion. 6. This rapid return of sensation is not due to down-growth of axis cylinders or to conductivity of the transplanted fragment, but must be explained by collateral nerve supply. 7. In many cases very early return of motion after transplantation may be due to vicarious movements of other muscles than those formerly paralyzed and not to a regeneration of the latter's nerve supply."

A New Suture for the Intestines.—Barker (*British Medical Journal*, July 16, 1898; *American Journal of the Medical Sciences*, April) describes a new self-feeding needle and holder with which he is able to place in the intestine with an ordinary fine sewing-machine needle a suture that is like the sewing of a machine. It is, however, capable of introducing any form of stitch desired. The handle of the needle holder carries three reels of thread and holds the needle in any desired position. In introducing the sewing-machine stitch the following method is employed: The needle is passed through the tissue and the loose end caught and drawn out a little longer than the length of the wound. The needle is then passed a second time and withdrawn slightly, leaving a loop; the loose end of the thread is passed through this and drawn tight and at the same time the needle is withdrawn and its thread tightened. The same process is carried out with each stitch to the end, where the final stitch is tied. This saves all the time and trouble of tying the sutures, with the exception of the last. The self-threading needle the author does not claim to be new, but the stitch he believes to be new and original.

The Improvement of Adenoids after Administration of Diphtheria Antitoxine.—Bécigneul (*Gazette médicale de Nantes*, January 1st; *Journal of Laryngology, Rhinology, and Otology*, April) relates the case of a child, aged seven years, with large pharyngeal adenoids, who was admitted to the hospital for a diphtheritic angina. An injection of Roux's serum was given. After culture the diagnosis made was staphylococcus angina; it was not due to Löffler's bacillus. After the serum injection the adenoids constantly diminished, and the child, who before the angina required operation, could easily breathe by the nose.

Heurtaux has tried in a case of adenoids in a child the same treatment (injection of ten cubic centimetres of antidiaphtheric serum). The result was successful; the adenoids disappeared in three weeks and the deafness was cured.

A Stethoscope for Use on Dependent Parts of the Chest. In the *Medical Record* for April 1st Dr. Andrew H. Smith remarks upon the difficulty of an culture the back of the chest in many cases in which the patient can not be moved from the dorsal decubitus without suffering. To meet this difficulty he has devised a stethoscope terminating in a shallow cup shaped like the cover of a pill box, the depth of which is less than half an inch. The rubber tubes are attached to the side

at points separated but a little distance from each other. The instrument is carried under the patient on the tips of two fingers, the thumb resting upon a projecting tongue which is continuous with the bottom of the cup, thus giving the necessary control.

With this instrument the auscultatory signs in the back of the lung can be obtained with scarcely any disturbance of the patient. Dr. Smith finds it convenient also in office practice, and especially in examining the heart in women, as it can readily be slipped down under the corset by simply unhooking the upper fastening of the latter.

The contrivance has some of the acoustic properties of the phonendoscope, and can be used with considerable satisfaction through several thicknesses of clothing.

Prolapse of the Urethra in a Young Girl.—M. Puech and M. Puig-Ametler (*Gazette des hôpitaux*, November 8, 1898; *Archives de médecine des enfants*, March, 1899) report the case of a young girl, six years of age, brought to the hospital with Pott's disease. For two years she had suffered from vulvovaginitis and urethritis of long continuance. For a month she had had vulvar pain and blood stains on her undergarment. In front of the labia minora, blocking the entrance to the vagina, was a tumor the size of half a nut with a widely dilated orifice in the middle. The tumor was soft and irreducible. On the introduction of a catheter, urine was withdrawn. It was evidently a prolapse of the urethral mucous membrane. M. Puech excised the tumor, and the child made an uneventful recovery.

Cosaprine, a New Antifebrile and Antirheumatic Remedy.—M. Vámosy and M. Fenyvessy (*Wiener klinisch-therapeutische Wochenschrift*, 1899, No. 2; *Presse médicale*, March 15th) have spoken highly of cosaprine, a sulphurous derivative of acetanilide, for its antifebrile and antirheumatic characters. It is a grayish-white powder, slightly salt in taste, odorless, and very soluble in water. Its reaction is slightly acid. M. Schudmak reports favorable results from its employment in sixty cases. In doses of from three grains and three quarters to seven grains and a half it notably lowers the temperature some hours after administration.

Its analgetic effect is less strong, but very certain. Its advantages over other similar preparations, especially in children, are stated to be its facility of administration, even in subcutaneous injections, its rapid action, and the total absence of secondary phenomena. So far neither cardiac, respiratory, nor sensory troubles have been noticed.

A Menstruating Man.—Dr. Rushton Parker (*British Medical Journal*; *Cincinnati Lancet-Clinic*, April 1st) records the case of a man, twenty-four years of age, who married a woman, but was unable to effect sexual intercourse with her. She noticed that he had a monthly sanguineous discharge lasting about three days and staining the linen. After eight months they consulted Dr. Parker. He describes the man as follows:

"I found nothing unusual in his general appearance, except a shy, cowed look, the penis, urinary meatus, and scrotum seemed normal, but the testes felt decidedly small and soft; he stated that he had never either abused himself or had any sexual feeling whatever. Being satisfied that he was at least not a complete man, and doubtless cowed by his wife's dissatisfaction, he readily consented to a separation and allowed her half his income."

Dr. Parker remarks on this case:

"It seems likely that this case differs from Ströbe's case of hermaphroditism, fully described in the epitome of the *British Medical Journal* for November 12, 1898, p. 79, merely in the fact that the rudimentary testes had descended into the scrotum, the man probably having also a uterus and Falloppian tubes."

Epilepsy and Epileptoid Manifested by Fright.—Professor Bejteref (*Obozrenie psijatrii*, December, 1898; *Revista de Ciencias medicas de Barcelona*, February 28th) has noticed in many cases of epilepsy attacks of fright, and says that such attacks are far from being rare in epilepsy. They may present themselves either in the form of an aura to attacks of *grand mal*, or as independent attacks alternating with the normal manifestations thereof. More rarely the fright phenomena constitute the principal manifestation of the epileptic neurosis, repeating themselves very often, being rarely replaced by ordinary seizures. The attacks of fright are not commonly accompanied by loss of consciousness or vertigo, but are very rebellious to treatment, or at least do not yield entirely to remedies ordinarily efficacious in epilepsy. Moreover, in the epileptoid seizures of progressive paralysis these terrors are at times observed, being distinguished from those which supervene in neurasthenia in that they do not show any connection with given external conditions, such as place, temperature, crowds, etc., as is the case in pathophobia.

The Tabetic Eye.—M. Gilles de la Tourette (*Journal des praticiens*, March 11th), in a recent communication to the *Société médicale des hôpitaux*, says that the ocular manifestations of tabes are numerous, since this disease affects the retina, the external muscles, and even the lacrymal passages. There is one symptom, however, which he does not remember to have seen noticed elsewhere. He has often, he says, seen to enter his consulting room a patient whose normal gait gave no suggestion of locomotor trouble, and at first glance has nevertheless marked him for a tabetic patient by the aspect of his eyes. It was not a question of meiosis, which, when punctiform and found in blue irides, suggests tabes, but a peculiar brilliant appearance of the eye, which, nevertheless, is expressionless.

This appears to the author to be a valuable early sign of the disease. It is independent of the condition of the pupils, which does not modify it, and is especially easy to note in those whose irides are dark in color.

Liquid Air as a Cautey.—According to the *Tri-State Medical Journal and Practitioner* for March, the use of liquid air as a cautey is already spoken of favorably. If having a temperature of 312° F. below zero, its action is, to all intents and purposes, the same as that of the most powerful actual cautey. It does not really burn, but utterly kills the tissues, leaving a blister not unlike a burn. Hence it has been suggested for cauterization in surgical practice. It is not only a good deal cheaper than the ordinary cautey, but it is much more efficient, and its action can be absolutely controlled. Indeed, a well-known surgeon has already performed a difficult operation on a cancer case with liquid air, and he has reported the case as cured.

Kernig's Sign in the Diagnosis of Meningitis.—According to the *Massachusetts Medical Journal* for March, Netter (*Bulletin médical*) calls attention to the sign given by Kernig, of St. Petersburg, for the diag-

nosis of meningitis, a sign not previously mentioned by physicians. Netter has found it in forty-one out of forty-six cases studied by him—i. e., in ninety per cent.

The patient is examined first in the dorsal decubitus and then sitting. In the first position it is very easy for the patient to extend the leg completely; in the sitting posture, however, the leg can no longer be extended completely. In very marked cases it can not be extended beyond ninety degrees, and in all cases not beyond a hundred and thirty-five or a hundred and forty degrees. But as soon as the patient lies down, complete extension is again easy. This phenomenon has not been met with outside of meningitis; no explanation is offered.

The Practice of Medicine in its Proper Light.—We quote the following from the *Clinical Reporter* for February: "What are we practising medicine for? Is our profession a business or a pastime?" These are questions put by *The Medical Examiner* in an editorial that appears in its current issue in defense of commercialism in medicine. "Is our profession a business or a pastime?" Neither, essentially, my lord! Our profession is "first, last, and all the time" a profession. Incidentally it may, in rare cases, be a pastime; it is, in most instances, a means of making a livelihood, and so far, incidentally, a business; but the relations which it establishes are relations of a peculiar personal trust on the part of the patient not only in the skill but also in the personal honor of the physician. It is this element of personal trust which, above all, distinguishes a profession from a mere business, and which forbids all devious methods, all commercial systems of offering or receiving commissions from other professional men, specialists, etc., for cases referred. It will be a sorry day for the medical profession when the majority of its members will look upon it as primarily a business—a sorer day for their patients!

The Parasitic Fungus of Cancer.—M. Bra has for nearly four years been prosecuting researches into the nature of cancer. These researches are given in full in the *Presse médicale* for February 22d, and we here give an abstract of them accompanied by reproductions of the original illustrations.

In cultures from a great number of different kinds of neoplasms, including carcinoma of the ovary, epithelioma of the tongue, carcinoma of the breast, sarcoma of the maxilla, carcinoma of the parotid, epithelioma of the cervix uteri, carcinoma of the body of the uterus, and cancer of the rectum, Bra has succeeded in regularly isolating a fungus apparently belonging to the *Ascomycetes*.

The Isolation of the Parasite.—This may be effected in two ways—viz., by fragmentation of the cancerous tissue and by bleeding, of which the former method is preferred. The tumor, freshly obtained, is submerged in a two-and-a-half-per-cent. carbolic-acid solution, then placed upon a plate sterilized by heat. The cancerous nodules are isolated and divided into small cubes of about three fifths of an inch, which are plunged into sulphuric ether and passed rapidly on a needle point through a flame. They are then sown in test tubes or small flasks containing bouillon of cow's udder, which are placed in an incubator at from 86° to 95° F. The tubes should not be opened for from fifteen to twenty days, at which period the culture frequently contains, independently of the infinitely small

spores that may be taken for bacteria, some adult and very characteristic forms. When these last are well developed, the cancerous fragment at the bottom of the vessel and the "magma" formed around it present a clear, rose tint, the bouillon is slightly turbid and also rose-colored, and on its surface appears a pellicle of a grayish-white tinge above, and flesh-colored beneath. This culture serves for the sowing of other tubes of bouillon, but in order to observe the parasite in its most

metres or more. They have a great tendency to agglomeration, being united by a colloidal substance which they secrete. They possess a central plasmic mass and an enveloping membrane of single or double contour, which does not stain (Fig. 1). Before sporulation the central plasma is homogeneous and stains uniformly. These spherules are reproduced endogenously by spores which make their exit from all points of the cell, and are expelled in the midst of a gelatinous agglutinating ma-

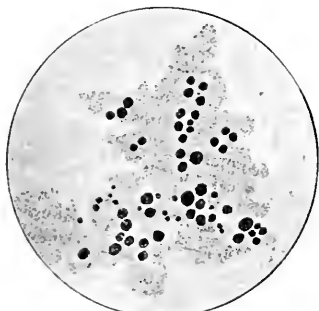


FIG. 1.—Culture of the parasite in bouillon. (Zeiss objective, immersion; ocular 1. Karmansky del.)

perfect development it should be transplanted to agar. An infinite series of cultures may be obtained, but it is best not to resow oftener than every twelve or twenty days.

The second method is by collecting some drops of the patient's blood with a sterilized pipette, either from the periphery of the tumor or by a prick of the finger. These are then sown in a tube of bouillon. In favorable cases a culture is developed in from ten to fifteen days. It is by no means the case that blood taken from the general circulation regularly gives cultures. As might be expected, the probability is in proportion to the infection of the patient. They are often

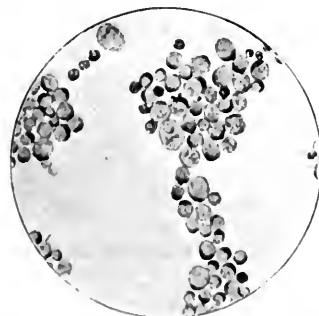


FIG. 2.—Culture of the parasite on agar. (Zeiss objective, immersion; ocular 1. Karmansky del.)

fertile, however, when the patient presents the characteristic pale-yellow carcinoma.

Morphology.—The parasite is found in the form of spherules and of cylindrical cells. The spherules are refractive, of a clear, yellow green color. They are rounded, ovoid, or polyedral. Their mean diameter is one micromillimetres, but they may reach twelve micromil-



FIG. 3.—Small isolated round spores and cylinders. (Zeiss objective, immersion, ocular 1. Karmansky del.)

terial, the spherule, when empty, becoming a mere honeycombed envelope. The inequality of sporulation and of the growth of spores produces on the surface of the spherule strange forms, linear, punctiform, reniform, falciform, etc. (Figs. 2 and 5), and impresses on them the varied aspects which have been described by the partisans of parasitic doctrines, and which have given rise to a belief in the existence of falciform bodies, the growing stage of coecidia, etc.

The smaller spores of about one micromillimetre display Brownian movements. They are ruby red, round, and unicellular, or of bacillary form, cylindrical and bicellular (Figs. 3 and 4). In the latter case they have



FIG. 4.—Culture of the parasite on agar. (Zeiss objective, immersion; ocular 1. Karmansky del.)

the appearance of encapsulated bacteria. The cylindrical cellulae, or coecidia, measure, on an average, in their greater diameter, from one to two micromil-, transversely two micromillimetres. They are refractive, almost cylindrical, and are covered with a thin, transparent, and fine granular envelope. They have a great tendency to agglomeration, and, or to

group themselves in concentric circles. They put forth germinal processes at their extremities. These hyphae are so irregularly divided that the author for a long time thought them to be exclusively unicellular. They

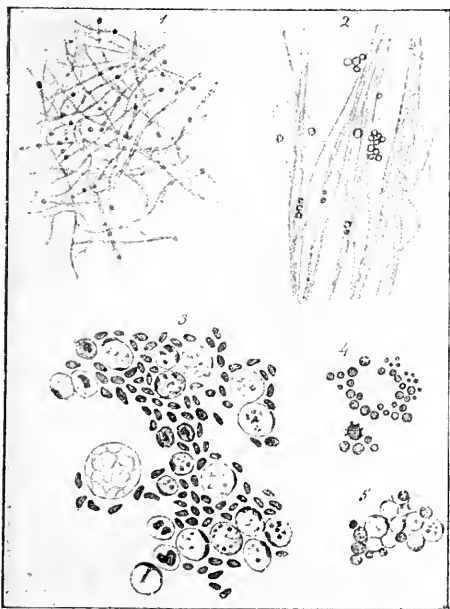


FIG. 5.—The author's cultures. (Zeiss objective, immersion; ocular 1. Karinsky *dL*.) 1. Culture of the fungus parasite in udder broth. Mycelium giving rise, both at the extremities and in continuity, to rounded conidia. 2. Culture upon bouillon of dried grapes. Mycelium in bundles with rounded conidia. 3. Culture on agar glucose. Spherules in a state of sporulation and dead spherules. Cylindrical, irregularly cylindrical, fusiform, and curved elements, rods, etc. This figure includes many parasite forms described by the partisans of the coccidian theory. 4. Culture in udder broth. Spores and spherules. These spheroidal elements of all dimensions correspond to the fuchsin bodies of Russell. 5. Culture upon agar agar.

are from one to two micromillimetres in diameter, and their length is not limited. They remain simple, and frequently branch, giving rise at their extremity or at the extremity of their branches to round, oblong, or elliptical coccidia. Sometimes the coccidia occur in file inside the spore-bearing filaments (Figs. 4 and 5).

Cultures of spherules free from cylindrical coccidia and mycelium filaments, and *vice versa*, may be obtained. But these forms, on being transferred from one medium to another, or as the medium grows old, are transformed one into the other. We have to deal, therefore, with two different forms of one parasite, and not with a symbiosis. In the membranes formed by the fungus on the surface of cultures, the germinal tubes sometimes remain as free hyphae, as filaments loose or irregularly interlaced; at other times they unite with one another to form homogeneous bundles cream coloring the interstitial spaces and being of different size and shape, containing mass of spherule in a state of activity or of death, bundles and mass which constitute an often extremely resistant pseudoparenchyma. *Pertidocoma* and *alaba* be formed.

The Staining, Bological Characters, and Cultures

of the Parasite.—The spherules and the coccidia are visible without staining. They are colored by watery alcoholic solutions of aniline dyes, especially by Kühne's blue. They take Gram, which allows of their being distinguished in the blood and the tissues. They may be stained by hematoxylin, gentian violet, and safranin. Picrocarmin sometimes stains them red and sometimes yellow.

The fungus is aerobic. It may be cultivated at the laboratory temperature, but the cultures are more prosperous at from 86° to 95° F. The spores resist, however, for half an hour at least the temperature of the autoclave. The parasite undergoes desiccation, in the course of a year, at the temperature of the laboratory. A stay of several months in water does not cause it to lose its power of vegetation. Carbonic acid under a pressure of sixty atmospheres for six hours does not kill the spores.

Udder broth is the best medium. It is prepared with cow's udder in the same manner as simple bouillon, with the single addition of about two to a thousand of chloride of sodium. It is neutral to turmeric. From about the fifth to the eighth day there forms on the surface of the liquid a whitish-gray pellicle, and a sedi-

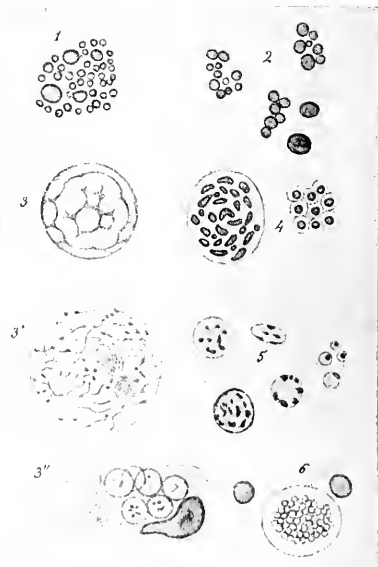


FIG. 56. Elements described by some authors as occurring in sections of cancerous tumors. 1. Capsules described without any explanation by M. Guérin and M. Fendel as found in cancer of the rectum, *Annals de micrographie*, 1894, vol. ix, pl. II. 2. Pseudo-coccidia, Russell's type, after Noegwirth, *ibid.* n. Fig. 50, 51, 52. 3. Parasites of cancer, after Sondakewitch, *pl. vii, fig. 1, Ann. Inst. Pasteur*, 1892, No. 8, pp. 545, 557. 3', Sondakewitch, Same collection, 1892. 4. Sondakewitch, *Ibid.*, 1892, No. 3, pp. 115, 117, pl. VI. 5. Bionchi, *Arch. de phys.*, 1894, series, vol. x, taken from Fig. 24 and 25, pl. V. 6. Parasites of cancer after Podyscholski and Savitschenko, *I. 1895, vii and viii, Figs. 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.*

ment of the same color falls to the bottom. The cultures are more abundant when ten per cent. of glucose is added to the broth. In sterilized milk they form grayish white membranes adherent to the test tube. In agar,

from the third day, round, grayish-white colonies form, which liquefy in about ten days. The agar becomes colored brown throughout. In serum they have the same characters as on agar. Gelatin liquefies and a grayish-

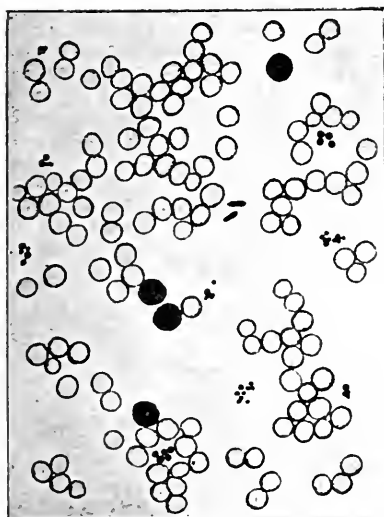


FIG. 7.—Blood taken from the vicinity of the tumor in a cachectic subject of cancer of the breast and uterine fibroma (Zeiss objective, immersion, ocular 1, after Karmansky). The parasite is seen in the form of free spores of various sizes. A little above, and to the right of the centre of the preparation are two cylindrical rods.

white pellicle forms on its surface. On potato, a viscid, grayish-yellow layer forms. After some time all these cultures lose their normal tint and take on a fine rose color, due to the dissemination of the ruby-red spores into the medium.

The Parasite in Cancers.—In cancerous tumors the fungus presents the same forms, spherular or cylindrical, as in cultures. These parasites, the author says, have been noted, but mistaken for coccidia by many observers; while they have been interpreted by the histologists as anatomical elements allied by insensible gradations to the neoplastic cells from which they have been held to be only degeneration products. Figs. 5 and 6 show the elements observed by the histologists in comparison with the parasites grown in the cultures, thus displaying their probable identity. These parasites, however, exist in large numbers in malignant tumors, occupying extracellular, intracellular, or intramammary positions, or simulating the cellulæ with its nuclei or nucleoli. But if the round and cylindrical forms of the fungus have been seen, even though wrongly interpreted, by other observers, the existence of a mycelium in cancerous tumors has not hitherto been suspected, excepting, perhaps, by Soudakewitch, who has described "a kind of spores borne on long filamentous" such as are accurately reproduced in Fig. 6, 37.

The fungi are found in the blood either in the activity of the tumor or in the general circulation. They should be examined in the fresh state without drying, or in the dry state by Gram's method, and counterstained with safranin. The parasites are colored violet, and the blood corpuscles rose colored.

Experimental Tumors and Infection.—Bra has injected intravenously one cubic centimetre of virulent broth culture into rabbits—the animals died of subacute mycosis from the fourth to the fifth day; in twenty-four hours when inoculated with two, and in sixteen hours with three cubic centimetres. Multiple lesions were found. In some cases rabbits previously submitted to subcutaneous injection of very small but increasing doses of the culture resisted subsequently the intravenous injection of a fatal dose. Inoculation of the culture into the breasts of animals, or its subcutaneous inoculation, produced formation *in situ* of tumors of the size of an olive, and tending to increase in volume. In some cases the skin became thin, and subsequently perforated, and gave vent to a thick, grayish-white fluid consisting of cellular detritus, spores, and sporules. In other cases small persistent cysts were formed, whose walls in thirty per cent. of the cases became thickened, filling the central cavity and giving rise in four or five months to hard, irregular tumors of the appearance and consistence of fibro-sarcomata (Fig. 8), which were infected with parasites, as in fibro-sarcomata of human beings. Portions of the tumors, being again sown in under broth, gave cultures of the parasite. Two or three months after inoculation extreme cachexia ensued, and dermatitis, gastric ulcer, glossitis, or hypertrophic cirrhosis appeared. No noticeable results were obtained in guinea-pigs. In bitches injection into the mamilla produced tumors sometimes ending in resolution, but sometimes augmenting and possessing the appearance of fibro-sarcomata and typical cancer. Dogs inoculated,



FIG. 8.—Fibrous tumor developed in the abdominal region of a rabbit, inoculated with the culture of the parasite. The structure is that of a fibrous tumor, and when seen under a microscope, it resembles a sarcoma.

although showing no local reaction, died in some months because emaciated, and the appearance of visceral tumors, apparently of the same nature. Subsequently to the death of the animal, the tumor info-

animals, Bra has observed a complete gradation from acute or chronic inflammation and sclerosis up to fibrosarcoma and cancer.

To sum up: 1. By inoculating animals with pure cultures of a fungus obtained from human cancer Bra

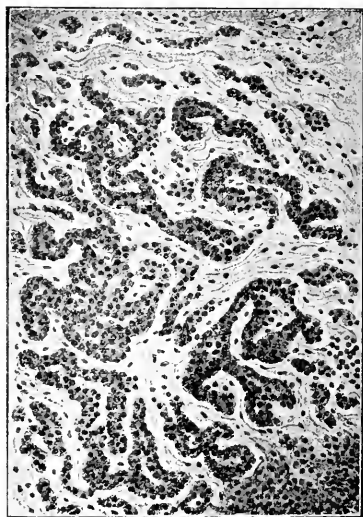


FIG. 9.—Carcinoma of the breast in a bitch inoculated six months previously ($\times 250$, after Karmansky).

professes to have caused them to develop tumors possessing indifferently the structure of typical cancer and fibrosarcoma.

2. These tumors, being sown themselves, have regularly produced pure cultures of the parasite like those obtained from human tumors.

Book Notices.

The Principles and Practice of Hydrotherapy. A Guide to the Application of Water in Disease. For Students and Practitioners of Medicine. By SIMON BARUCH, M. D., Visiting Physician to the J. Hood Wright Memorial (formerly Manhattan General) Hospital, etc. With Numerous Illustrations. New York: William Wood and Company, 1898. Pp. vii+155.

THE debt under which we all, as physicians, rest to Dr. Baruch for his long-continued efforts in behalf of intelligent hydrotherapy has become greater with the appearance of the work now before us. For readers in English such a work has long been a great necessity, and it is a matter of satisfaction to us that the need has at last been supplied and by one whose fitness for the work is unquestioned. Enthusiastic in many ways the work is, but not to an unwarranted degree, for threaded out there are maintained a reasonable part and a balance which are none too often perceptible where a special form of therapeutics is the theme.

Two parts constitute the work. The first treats of the physiology of water applications, while the second discusses their therapeutics. In one respect we are disappointed, for, while hydrotherapy, as the author himself points out, includes the internal use of water as well as the external, the former receives but scant notice. This is to be regretted, but after all it is not unnatural, for indeed the newer hydrotherapeutics is concerned chiefly with water in its external application. Of these applications the presentation is in every way satisfying and complete, while the very practical quality of the chapters, whether they are descriptive of apparatus and technics or of clinical applications, is to be noted and admired.

Naturally the *pièce de résistance* is the full cold bath, and, while this, thanks largely to Dr. Baruch's efforts, is now a matter with which most of us are familiar, nothing but good can come from its continued discussion. The prominence given to it does not signify a neglect of other measures. The chapter upon irrigation is noteworthy for completeness and the inclusion of a number of very recent observations, especially as concerns enterocolysis.

Of the diseases in which the water treatment is so valuable, typhoid fever will probably ever be the field for the most brilliant results, and this from its very nature and the important part nerve invigoration plays in its course. The chapter upon pneumonia, however, is little less interesting and valuable, as are also those upon enterocolitis and cholera. Insolation is discussed to our great satisfaction and particularly from the fact made prominent by the author that cutaneous stimulation (by affusion) is essential if good results are to be expected, a matter to which we have before alluded. The book is valuable in an unusual degree, and its faults are few and inconspicuous.

The Dawn of Reason, or Mental Traits in the Lower Animals. By JAMES WEIR, JR., M. D. New York and London: The Macmillan Company, 1899. Pp. xiii+234. [Price, \$1.25.]

IN this little volume the author devotes his time to a somewhat elaborate description of animal traits. His object is to show that these so-called psychological characteristics indicate that the lower animals' mental organs, if the term can be thus rightly applied, are the same in kind as those of man. The subject of necessity involves much technical phraseology and the use of abstract terms pertaining to nice points of distinction, such as the differences between instinct and reason.

As a contribution to the broad study of biology, considerable of interest has been adduced and some points involving original research are recounted. But we doubt whether much of real value has been presented relative to the study of comparative psychology other than an accentuation of the fact that from the amoeba to man there exists a certain degree of consciousness and so-called "general intelligence." As another writer on the subject has it, "The turning point in this endless and uninterrupted process of evolution, the point at which the beast ceases and man begins, is where the soul is no longer the mental, but asserts its supremacy as the master of the body."

Assuming that this point is where true reason might have its origin, we do not so clearly follow the argument for an earlier dawn. As a matter of fact, the question is, more or less, one of definition. The volume is not

without interest and, as compared with a previous effort of the author's, is more to be recommended.

The Living Organism. An Introduction to the Problems of Biology. By ALFRED EARL, M. A., Late Scholar of Christ's College, Cambridge, etc. London and New York: The Macmillan Company, 1898. Pp. xiii+271. [Price, \$1.75.]

It may be assumed, to begin with, that there is great need of elementary training in the field of biological research. It is obvious that a fault in the premises produces far-reaching error, and much of the disrespect with which the world receives physiological and psychological results is due to a lack of confidence in the methods. We should all be intensely interested in much that comes from the laboratory did we believe that a truly philosophic spirit and a scientific instinct were behind it.

On the other hand, progress in biological research is made by comparatively few investigators, those whose lifelong training has been given to it; a few others help, the greater number merely trouble the stream with loose speculation and conjecture. To these latter we fear such a book as Mr. Earl's will not be adapted, in spite of their need of it; but its influence would be excellent.

Degeneracy: its Causes, Signs, and Results. By ERGENE S. TALBOT, M. D., D. D. S., Fellow of the Chicago Academy of Medicine, etc. With One Hundred and Twenty Illustrations. London: Walter Scott, 1898. Pp. xvi+372. [Price, 6s.]

THE author, who has, according to the preface, been engaged for more than twenty years in "a limited medical department of biology," dentistry, says that the truth of the degeneracy doctrine had forced itself upon him long before its popular apotheosis under Lombroso and Nordau.

The results of his observations and extensive reading have furnished material which he hopes will be of use to parents and educators. With this idea in mind, he has avoided extremes, and has attempted, as he says, to lay down general principles for practical purposes in a way that permits of their application to the solution of sociological problems.

The book deals with the stigmata of degeneration somewhat extensively, and it is probable that the average "parent and educator" will have a bad quarter of an hour when he begins to examine himself or his charges in the light of this information, but the result will in many cases be helpful. We doubt, however, whether the portions of the book dealing with still unsettled points of brain physiology and matter of a special or statistical nature will be of value to the non-medical public.

A book on the same lines, with the descriptions and pictures of the extreme types of degeneration and their anatomy omitted, but with more stress laid on the commonplace signs and causes of nervous fatigue in modern life, and especially in childhood, and their prevention, would be of much use to the public. Such books exist, but they represent the two extremes, and each extreme is in danger of exciting only a morbid or sensational interest in the mind of the average reader. We might almost add the thrust for this class of books to be by the non-professional reader to the ever increasing list of stigmata.

As this book is not especially intended for the medical profession, it is fair to criticise it only in general terms. The author has made numerous and, for the most part, well-chosen quotations, but a more careful use of quotation marks would seem to be desirable.

On the whole, the book is well written and interesting. It shows enthusiasm if not optimism, industry, and, in the author's own field, an excellent power of observation.

Examination of Water. (Chemical and Bacteriological.) By WILLIAM P. MASON, Professor of Chemistry, Reims-solier Polytechnic Institute, etc. First Edition. First Thousand. New York: John Wiley & Sons, 1899. Pp. 135.

A MORE practical manual on water examination it would be difficult to imagine, and the work has that great quality, too, of simplicity and easy comprehensibility which in matters scientific is so unnecessarily rare. Brevity, moreover, is a prominent trait, and yet it is not insufficiency in any sense, though the subject has not been exhausted, but rather shown forth in its essentials.

The major part of the volume is devoted to chemical analysis, and so well expressed is the matter that the physician may derive little less than the chemist from its perusal. The smaller part is on bacteriological analysis. Enough, however, is here set forth to give one a comprehensive idea of the bacteriology of water used for domestic purposes without poaching upon the intricacies and refinements of the subject which necessarily pertain to the bacteriologist.

The book gives one a very excellent survey of its field and is warmly to be commended.

Fever-nursing: Designed for the Use of Professional and Other Nurses, and especially as a Text-book for Nurses in Training. By J. C. WILSON, A. M., M. D., Visiting Physician to the Hospital of the Jefferson Medical College and the Pennsylvania Hospital, etc. Third Edition, revised and enlarged. Philadelphia: J. B. Lippincott Company, 1899. Pp. 3 to 241. [Price, \$1.]

THE third edition of this excellent little work presents the admirable features of its predecessors, together with the additional considerations which medical progress has required. Of these, the most conspicuous are in the subjects of serum treatment and disinfection. Noteworthy, too, are observations upon the nursing of soldiers ill with febrile diseases, in camp as well as in transportation.

The book can scarcely fail to be useful and helpful to those for whom it was written. Particularly noticeable and of the greatest value is the simple, comprehensible, and interesting style in which it is written.

A Compend of Human Physiology. Fully and Adapted for the Use of Medical Students. By AUGUST F. BRUNNEN, A. M., M. D., A. O. Professor of Physiology and Hygiene, University of Pennsylvania Medical College, etc. Ninth Edition, revised and enlarged. With New Illustrations and Tables of Physiological Constants. Philadelphia: P. B. Blakely Son & Co., 1899. Pp. viii+260. [Price, 80c.]

THE fact that this book has been so ready in its ninth edition, speaks well for its merit. The text has been revised and enlarged in a convenient

table of physiological constants has been added. As in previous issues, the treatment of the subject is clear and concise, and the whole field of physiology has been gone over in a way which, for a book of its kind, leaves very little to be desired.

BOOKS, ETC., RECEIVED.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Clinical Neurology and of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School (the Chicago Medical College), Chicago, etc.; and Frederick Peterson, M. D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York, etc. With Three Hundred and Five Illustrations. Philadelphia: W. B. Saunders. 1899. Pp. 11 to 843. [Price, \$5.]

Albuminuria and Bright's Disease. By Nestor Tirard, M. D., F. R. C. P., Physician to King's College Hospital and Senior Physician to the Evelina Hospital for Sick Children, London, etc. With Original Illustrations. London: Smith, Elder, & Co., New York: G. P. Putnam's Sons, 1899. Pp. 362. [Price, \$5.]

An Essay on the Nature and the Consequences of Anomalies of Refraction. By F. C. Donders, M. D., Late Professor of Physiology and Ophthalmology in the University of Utrecht. Revised and edited by Charles A. Oliver, A. M., M. D. (Univ. Pa.), one of the Ophthalmic Surgeons to the Philadelphia Hospital, etc. With Portrait and other Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. viii-9 to 81. [Price, \$1.25.]

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M. D. From the Author's Second German Edition, revised and rewritten. Philadelphia: W. B. Saunders, 1899. Pp. 11 to 291. [Price, \$2.]

Les régénérations d'organes. Par le Dr. Paul Carnot, Docteur es sciences, etc. Avec 16 figures dans le texte. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 96. [Price, 1 fr. 50.]

Transactions of the Medical Society of City Hospital Alumni. For the Year 1898. St. Louis.

Seventh Biennial Report of the North Carolina Board of Health. 1897 to 1898.

Unguentum Hydrargyri or Blue Ointment Administered by the Mouth. By Albert Bernheim, M. D., of Philadelphia. Read before the Mississippi Valley Medical Association, October, 1898.

The Diagnosis of Early Pregnancy. By Albert Bernheim, M. D. [Reprinted from the *American Practitioner and News*.]

Small-pox and Vaccination. By Albert Bernheim, M. D. [Reprinted from the *American Practitioner and News*.]

Correspondence between a Layman and a Surgeon on the Subject of Appendicitis. By Robert T. Morris, M. D. [Reprinted from the *Medical Record*.]

Genital Neuralgia and Genito-reflex Pains. By Frederick Porter Hammond, M. D. [Reprinted from the *Philadelphia Medical Journal*.]

The Etiology of Seasickness. By William Edgar Darnall, M. D., of Atlantic City, N. J. [Reprinted from the *Journal of the American Medical Association*.]

The Dietion of Amylaceous Food. By Robert W. Hastings, M. D., of Brooklyn, Massachusetts. [Reprinted from the *Annals of Gynecology and Pediatrics*.]

A Peculiar Epileptical Case of the Cerebellum, and some Remarks concerning the Neuroglia. By Dr. E. J.

Mellish and Dr. Maximilian Herzog, of Chicago. [Reprinted from the *Chicago Medical Recorder*.]

Prostatectomy. By Parker Syme, M. D. [Reprinted from the *Annals of Surgery*.]

Appendicitis. By H. O. Walker, M. D., of Detroit. [Reprinted from the *Physician and Surgeon*.]

De la réunion immédiate du pavillon de l'oreille après la cure radicale de l'otorrhée. Par le Dr. Moure, de Bordeaux. [Extrait du *Travaux de la clinique des maladies du larynx, des oreilles et du nez*.]

Sur la sérothérapie dans le traitement de la tuberculose. Par le Professeur E. Maragliano. [Extrait du *Congrès de la tuberculose*.]

Acokanthera Schimperii: its Natural History, Chemistry, and Pharmacology. By Thomas R. Fraser, M. D., F. R. S., etc., and Joseph Tillie, M. D., F. R. S. E., etc., of Edinburgh. [Reprinted from the *Archives internationales de pharmacodynamie*.]

Ueber die Grenzen der Wirksamkeit des Diphtherie-Heilserums. Von Professor W. Dönitz. [Extrait d'*Archives internationales de pharmacodynamie*.]

Die Immunisation gegen die Rinderpest nach den im Institut für experimentelle Medizin in St. Petersburg und auf der Station "Iknewi" im Gouvernement Tiflis gesammelten Erfahrungen. Von M. Nencki, N. Sieber, und W. Wyzniakiewicz. [Extrait d'*Archives internationales de pharmacodynamie*.]

Ueber breite Amputation mit nachfolgender Autoplastik bei Brustkrebs. Von Professor Dr. Assaky in Bukarest. [Separatdruck aus der *Münchener medizinische Wochenschrift*.]

New Inventions, etc.

FOSTER'S MODIFICATION OF THE HAGEDORN NEEDLE.

By WILLIAM DAVIS FOSTER, M. D.,
KANSAS CITY, MISSOURI.

The advantages alleged for this new kind of needle (Hagedorn) are:

1. Being curved on the edge, they are more resistant, and the point follows without deviation the intended direction of the puncture.

2. The eye, perforating the flat side, can be made larger and tapering at the terminal end; in consequence of which, even a stout double thread will pass without difficulty through the puncture, which no surgeon will fail to appreciate.

3. The needle, owing to its equal thickness, can be firmly and safely taken hold of at any point, whereby its direction will be much facilitated.

4. The cutting edge, being on the convex side, can not be injured or blunted by the needle-holder and may be easily resharpened by the surgeon himself.

5. The incisions of the old cross-edged needles spread, while the incision made by the new needle is in a right angle to the edge of the wound, similar to a buttonhole. The two edges of the stitch wound, on tying the sutures, are drawn into close apposition, whereby their union is favored.

6. The flat needles cause less injury, which is of high importance, especially in sutures of nerves and tendons.

The practical surgeon will note that the use of the

Hagedorn needle requires a specially made needle-holder. It may not always be convenient to carry this needle-holder in the surgical bag. I have, at the suggestion of the Rev. Dr. J. Stewart Smith, of this city, had Tiemann & Co., New York, modify this needle so that it may be held by any needle holder or by a hæmostat.



Hagedorn Needle

FIG. 1.

The cuts, Figs. 1 and 2, will show a Hagedorn needle, and also the modifications referred to. The original specifications show that by making the needle *round* instead of *flat*, of the same weight of metal in the rest of the needle as at present, this modification does not in any sense impair the strength or peculiar cutting qualities of the needle. The heavily shaded part of the needle represents the *round part*.



Foster's Modification of the Hagedorn Needle.

FIG. 2.

If this improvement proves as useful to other surgeons as it has to myself I shall be abundantly repaid for any trouble that has attended its construction and illustration.

I am indebted to my friend Dr. J. C. Stewart, of this city, for the fine pen drawings from which the cuts are made.

Miscellany.

Lord Curzon on Western Medicine in India.—The *British Medical Journal* for March 11th devotes a column to some remarks of the Viceroy of India on this subject, and to appreciative comment thereon. As Lord Curzon has openly referred to the great assistance rendered by his American wife in his aims for the benefit especially of Indian women, the remarks have a special interest for us on this side of the water. The *Lancet* says: "The Viceroy of India said many graceful and true things about medical science in his speech at the annual meeting of the Countess of Dufferin's Indian Calcutta for giving medical aid to the women of India, on March 3d. After saying that the British had come to India as conquerors indeed, but as benefactors also, bringing religion, law, literature, and science into their hands; and after admitting that there were but two views about the three gifts first mentioned, the

said of science, and of medical science in particular: 'Now I come to the last boon, of science, and medical science in particular. About this no two opinions can possibly be entertained. There may be prejudices and scruples arising from long custom, ignorance, or other causes, but doubts there can not possibly be, and I say this, that if we had come back to you from the West with our medicine in our hand, and with that alone, we should have been justified in our return. For what is this medical science we bring to you? It is no mere collection of pragmatical experimental rules. It is built on the bedrock of pure, irrefutable science; it is a boon which is offered to all, rich and poor, Hindu and Mohammedan, woman and man. It lifts the *purdah* without irreverence. So far as I know, it is the only dissolvent which breaks down the barriers of caste without sacrilege. Medical science, indeed, is the most cosmopolitan of all sciences, because it embraces in its merciful appeal every suffering human being in the world. Now, our Anglo-Indian poet Kipling—I claim him as an Anglo-Indian, though he is also the property of the world—in his latest poem, and I hope and pray—and I am sure you join in that prayer—that it will be by no means his last, has thus written:

"Take up the White Man's burden—
The savage wars of peace,
Fill full the mouth of famine,
And bid the sickness cease."

Well, this part at any rate of the white man's burden, this portion of the bounty of the Aryans of the West, has not been ignored by the British in India, and in my view every hospital we build in this country, every doctor we train, every nurse we turn out, every patient we cure, is part of the service that we owe to India; is an element of our duty in this country; is part of the home-coming gift which the Aryans of the West have brought back to their kith and kin." The *British Medical Journal* remarks: "This tribute is as well conceived as it is generous, and we would venture to hope that Lord Curzon of Kedleston perceives the full significance of the words he uttered."

The Seventh Regiment, N. G. S. N. Y.—A well-deserved testimonial was lately presented to Dr. Daniel M. Stimson on his completion of twenty years' service. It was in the form of a gold medal, and it was intended as a token of the esteem in which Dr. Stimson is held, not only as a surgeon and an officer, but also as a man.

The Study of Pharmacy in India.—The *Pharmaceutical Review* for April says: "Much has been said and written about the necessity of taking up the white man's burden. No matter how poor or how good an opinion we may have of the motives that led to the adoption of this 'burden,' if we look at the ultimate result, we may not regret the fact that the Aryan Saxon race has acquired almost everywhere, and by some of her agents of evil action were doing, a bad name. Who would have thought, however, that the British would teach England a lesson in the study of pharmacy at the close of this century, a lesson which has not become known throughout the pharmacy of the world. We desire to call special attention to the study of what we should call a 'white man's burden' in western India. The college founded by the Government of Bombay, and the outbreak of the plague in the East. Other colleges have been founded, and the necessary amount allowed for the maintenance. More

than that, in order to secure students, thirteen scholarships are provided by various states. Where is there a state in Christendom that has done relatively as much for the advancement of pharmacy, where private munificence and legislative liberality have joined hands for the advancement of our calling? India is teaching the Christian Anglo-Saxon a lesson that we should do well to take to heart. What is more, this is but the beginning of an intellectual renaissance that seems to be in store for a people whose early civilization more and more excites our wonder and admiration."

Verses in Praise of a Physician.—The following verses, originally published in the *Westminster Gazette*, have been widely quoted, and were published in the *Lancet* for March 4th. They are by Mr. James Rhoades, a translator of the *Æneid*. The *Lancet* for March 25th republishes them with the subjoined Latin translation, in elegiac metre, by Dr. J. P. Steele, of Dublin:

TO A CERTAIN DOCTOR.

"I'm only a doctor," is your cry,

"Concerned with the body's ills and pains,
But witless of art and poesy.

And lost to the spirit's finer aims."

Ay, only a hand by hundreds blest,

A heart that has ach'd for all, save self,

A brain racked ever to find them rest,

A soul whose riches are scorn of self.

In vain we argue; the theme is old;

Some men love horses, some singing birds;

But e'en if the poet's song ring gold,

Shall deeds that are gold weigh less than words?

You waived the pleasure and wooed the strife,

Of thorns, not roses, have made your bed;

You longed for the lovely side of life,

And fought with the terrible instead—

Longed sore, but never had time to give,

"Till now it is all too late," you say.

So be it. Why, man, the life you live

Is one long poem from day to day.

[*Idem Latine Redditum.*]

MEDICO CUIDAM.

"Sum medicus tantum qui sanem vulnera læsi

"Corporis et morbos," care Machaon, ais;

"Quid nūhi cum Musis cui surdo cantat Homerus,

Cui profert cerco chelada signa Myron?"

Sed tamen est pergrata manus tua millibus ægris

In quibus es totus nec memor ipse tui;

Dumque feras aliis requiem tibi sæpe negatam,

Sæpe bonus rennis quas merearis opes.

Cur remoramur in his? sunt argumenta vetusta;

Nunc conipes, illum flens philomela juvat;

Aurea sint Sapphus lyra et aurea verba, Machaon,

Aurea sunt per te facta magis que valent.

Gaudia præteritis optasti tristia vite,

Promptior in spinis quam regulare rosas;

Dilexisti puer Aonidum nemus; arma Saluti-

Ca traque te retinent Hippocrate, enem;

Offa et Apele, dolles nunc prorsus ademptas,

Intercepe. Cane mentis et artis inops,

Sed quomodo læsa lacerare? Deini carminis instar

Est quantum vite canique, Machaon, agi!

J. P. S.

The January State Examinations.—We learn that 122 candidates were examined, of whom 94 were successful.

Julia's Incubator.—*Lyon médical* for March 19th remarks upon the habit among women of using the bosom—the space between the mammary glands—as a repository for various articles, letters, the watch, the purse, and the like. Our contemporary goes on to say that Julia, daughter of Augustus Cæsar, being pregnant, was desirous of giving birth to a son. In order to ascertain the sex of her unborn child, she carried an egg in her bosom. The augury was auspicious; a cock was hatched from the egg, and she bore her husband a son.

The New York City Medical Association.—An association having this name has recently been incorporated consisting of members residing in the various boroughs of the city.

White Men in the Tropics.—The *Army and Navy Journal* for April 8th says that in an article in the *Independent* Mr. Alfred Russel Wallace characterizes as a myth the current idea that white men can not live in good health in the tropics. The trouble is not with the climate, but with diseases resulting from insanitary conditions such as prevailed in Europe a century ago with the same result, and still prevail to a large extent in temperate zones. Mr. Wallace says: "Commonly associated with the tropics are the various forms of malarial fevers, but these also are in no sense due to the climate, but simply to ignorant dealing with the soil. My own experience has shown me that swamps and marshes near the equator are perfectly healthy so long as they are left nearly in a state of nature—that is, covered with a dense forest or other vegetation. It is when extensive marshy areas are cleared for cultivation, and for half the year are dried up by the tropical sun, that they become deadly. I have lived for months together in or close to tropical swamps, both in the Amazon Valley, in Borneo, and in the Moluccas, without a day's illness; but when living in open cultivated marshy districts I almost invariably had malarial fever, though I believe the worst types of these fevers are due to unwholesome food. But here again, malaria was equally prevalent in England less than two centuries ago.

"If we take the great belt about two thousand miles wide, extending from twelve to fifteen degrees north and south of the equator, we have an enormous area, by far the larger part of which is not only well adapted for European colonization in the true sense—that is, for permanent occupation by white men—but is, with proper sanitary precautions the most healthy and enjoyable part of the world, and that in which the laborer can obtain the maximum return with the minimum of toil.

"It is a well-known fact that in Ceylon and India the men who enjoy the best health are the enthusiastic sportsmen who seize every opportunity of getting away from civilization, and who often submit to much privation and fatigue, with benefit rather than injury to their health. The fact is that white men can live and work anywhere in the tropics, if they are obliged, and unless they are obliged they will not, as a rule, work even in the most temperate regions. Hence, wherever there are inferior races, the white men get these to work for them, and the kinds of work performed by these inferiors become *infra dig* for the white man. This is the real reason why the myth, as to white men not being able to work in the tropics, has been spread abroad."

Original Communications.

SYPHILIS AND THE LIVER.*

By J. G. ADAMI, M. A., M. D., F. R. S. E.,
PROFESSOR OF PATHOLOGY IN MCGILL UNIVERSITY, MONTREAL.

WITHOUT doubt the most important fact elucidated by a study of the hepatic lesions of syphilis is that, from an anatomical and histological point of view, no distinction can be drawn between secondary and tertiary syphilis.

Clinically, I admit that such a distinction is useful, nor do I wish it to be thought for a moment that I imagine it can be done away with, although even clinically—as seen in connection with the syphilodermia—the establishment of a hard-and-fast demarcation between what is secondary and what tertiary leads not infrequently to confusion. The most that can be laid down is that when syphilis is acquired in the ordinary way, by sexual connection, the extension of the disease in general follows a definite course, the tissues tending to be affected in definite order. Or perhaps it is more correct to say that in syphilis, as in other zymotic diseases—I use the term zymotic in its strict sense—there is a local or tissue predisposition, so that certain tissues are apt to be more extensively and more markedly affected than others, the virus multiplying more readily; so that in them, as a consequence, there is an earlier and more pronounced reaction.

But while this is the case, the reaction in a given tissue is of like order, be the period of local infection early or late; at most there may be histological differences caused by the age of the lesions and by variation in the interaction between virus and tissue. If the virus be strong, or the tissue be possessed of feeble reactive powers, the histological appearances differ to a greater or less extent from what is seen when the virus is weak or the tissue possesses originally or has acquired strong reactive power. And as a corollary to this, it may be said that where the virus is powerful and there is rapid proliferation there, in such diseases as syphilis and tuberculosis, the effects upon the tissues are modified so that we have to deal not solely or not in the main with the local disturbances caused by focal growth of the virus (infective granulomata), but see other well-marked anatomical changes, brought about by diffusion of the virus. In other words, where the tissues are susceptible and the virus relatively powerful there may be generalized tissue disturbances apart from, and in addition to, the granulomatous developments directly caused by the focal proliferation of the germs. For at the start it must be laid down that, although as yet we are uncertain as to the exact causative germ of the disease, syph-

lis is a disease of microbic origin. The more one studies, the more is one convinced that the analogy between tuberculosis and syphilis is complete—only in the one we have isolated and studied the germ, in the other we have not.

For what do we find with regard to the hepatic manifestations of syphilis? Let us first take those of the congenital disease. There are many reasons why these should be considered first: these were the first specific hepatic manifestations to be studied and clearly recognized; they are much more frequent and more extensive than are hepatic lesions in the disease of postnatal acquisition, and, death occurring very frequently within a month or two after birth, there is less uncertainty as to the period of development and duration of the lesions than there can be in the disease of adult life.

That the liver should be so frequently affected in this form of syphilis is easily understood if we remember that the specific syphilitic lesions of the newborn are congenital and not inherited, that the infection is through the placenta, and that, as a consequence, the infected blood coming from the placenta passes through the liver before it reaches the heart or any of the other tissues of the fetal organism. Chiari's well-known observation may here be repeated—namely, that in a hundred and forty-four cases of infantile syphilis he found the liver affected, and that extensively, in a hundred and twenty-three, or nearly nine tenths. In the adult, on the other hand, both brain and testicle are more frequently the seat of extensive lesions, and when it is remembered how relatively common is tertiary syphilis and how relatively uncommon specific disturbances of any of these three organs the contrast between the frequency of congenital and acquired hepatic disturbances become more manifest. At the same time I am not prepared to accept Fournier's statistics as perfectly reliable; careful observation of 3,429 cases of tertiary syphilis should surely reveal clinical evidence of more than nine cases of hepatic implication.

This is not the place for me to dwell upon the vulgar error of speaking of *inherited* instead of *congenital* syphilis; suffice it to say that Gartner's * *et hoc est absurdum* of the inheritance, so called, of paternal tuberculosis must hold equally for syphilis. Indeed, were it possible for the bacillus or germ of syphilis to be present in the ovum at the moment of fertilization, to lie latent during the embryonic period and only to cause reaction during fetal life, there is no reason why the different organs have assumed the form and size and time which will pertain to them, then, in the adult stage, even then such presence of the germ would not be true

* Fournier, *Précis de Médecine Syphilitique*, p. 10.

† By the late Dr. Fournier, it is stated that in 100 cases of tuberculosis probably the majority of the organs were affected, and that all are examples of such focal infection, and that the same is true of the disease itself.

* A contribution to the discussion upon syphilis at the New York Academy of Medicine, March 9, 1899.

inheritance—it would be an epiphenomenon; for true inheritance demands the carrying over of features peculiar to the germ plasma of the parents. The fortuitous inclusion of a microbe in one particular ovum is not a matter of inheritance.

The different forms of lesions due to syphilis to be met with in the infant's liver are, I think, included in the following list:

- I. Well-defined gummata.
- II. Miliary gummata with generalized fibroid change affecting circumscribed areas of the liver.
- III. Admixture of miliary gummata and generalized fibrosis affecting the whole organ, which is in consequence enlarged.

IV. Generalized atrophic cirrhosis without much evidence of gummata, but associated with icterus, œdema, etc., the organ being very granular and contracted.

Time forbids that I should quote examples of these different conditions. Quite the commonest is the second form, in which there are no well-developed gummata as generally understood, but on section through the affected areas numerous minute focal collections of small round cells are to be made out, invisible or just visible to the naked eye, and in their neighborhood extensive pericellular fibrosis, so that the organ presents a patchy appearance, paler areas of large size standing out against the darker red or liver-colored background of the unaffected tissue. Here we have to deal with a relatively early and progressive stage of disease in which there is little or no necrobiosis and development of gummy matter.

There are, however, fairly frequent cases on record of the development of true gummata, easily seen by the naked eye, some as large as an almond, recognized, not, I believe, in children born dead, but in those dying as early as two weeks after birth (Canton), and at times showing signs of contraction.

The relationship between these miliary gummata and the gross gummata of the liver is that between miliary tubercles and isolated caseous tubercles of the same organ. We never think of suggesting that the two latter forms of tubercle indicate different periods of the tuberculous process. At most we regard the first as of more acute, the second as of more chronic development. We know full well that miliary tuberculosis of the liver may develop at any stage of the disease, either soon after the primary infection or only as a terminal event after long years of slow and, it may be, intermittent extension of the disease elsewhere. The fact that both gross and miliary gummata may occur in the liver of the newly born is an absolute proof that the two forms are not characteristic of two different stages or periods of the disease—"absolute," that is to say, unless we are prepared to admit that while certain tissues, such as the skin, present well-marked secondary lesions, others may present either secondary or tertiary changes. If we do this, then the use of the terms becomes almost meaning-

less. For it must be kept clearly in mind that while the livers of these syphilitic infants show extensive fibrosis and indications which usually are recognized as of tertiary type, the cutaneous eruptions are of the nature of secondary manifestations.

But over and above the granulomatous changes in the infant's liver it is most noticeable that a more generalized affection is the characteristic feature—namely, fibrosis affecting either the whole organ or larger or smaller areas. Such fibrosis might be due to various causes; indeed, our knowledge of the ætiology of cirrhotic changes in the liver, as in the kidney, and our knowledge of fibrosis in general, is not sufficiently advanced to permit us to make positive statements. And yet, since 1896, when in this very room, although not before your society, it was my privilege to deliver the Middleton-Goldsmith Lectures,* and I discussed the pathology of fibrosis, some little advance has been made in our conception of the process. For, on the one hand, Flexner† has shown that toxic substances (the blood serum of another animal) may lead to the development of cirrhosis, and, on the other, Weaver,‡ of Chicago, within the last few weeks, working (I think I may say) along lines suggested by certain publications of mine, has demonstrated that bacteria exist which directly induce hepatic cirrhosis. Thus it would seem that whether in the process of excretion of toxic substances by the liver cells, or by the taking up of certain bacteria and the influence of their toxins when so taken up, the liver cells may undergo a parenchymatous degeneration so intense that death ensues, and following thereupon a replacement fibrosis occurs, more or less pure and unaccompanied by acute inflammatory change according as to whether the parenchymatous disturbance is unaccompanied by interstitial irritation or no. Where many miliary gummata are present much fibroid change is eventually brought about by the tissue changes which follow their development.

We are not as yet in a position to state whether the fibroid change of this type in the liver of the syphilitic child is a consequence of the attempted removal of the syphilitic germs from the portal circulation by the agency of the endothelium of the hepatic blood-vessels and by the liver cells, or whether it is purely the circulating toxins of the disease that cause the disturbance. To me it would seem that one or other of these causes must be at work. The pericellular character of the cirrhosis is against the change being in the main a fibrosis following upon round-celled and miliary gummatus infiltration, while the fact that the change may affect the whole organ, as again the very extent of the areas when the whole organ is not affected, is quite opposed to the view that we have to deal with primary focal

* *Medical Record*, 1896.

† Flexner. *Transactions of the Pathological Society*, Philadelphia, 1896.

‡ Weaver. *Philadelphia Medical Journal*, February 4, 1899, p. 283.

necroses, such as are to be met with in typhoid and other acute infective diseases, or in infarctous disturbances.

If Marchand's* cases of granular cirrhosis occurring in fetuses born dead are, as he holds, of syphilitic origin, they afford evidence of the extreme results of such fibrosis following upon generalized syphilitic parenchymatous hepatitis.†

Thus, to sum up the broad features characterizing the syphilitic manifestations in the infant's liver:

1. Syphilis may lead either to granulomatous deposits in the organ or to interstitial fibroid changes.

2. The specific granulomata may be present either in the form of minute multiple miliary gummata, or of isolated larger gummata, such as in general are regarded as being of tertiary nature.

3. It is not possible to regard the one form as secondary, the other as tertiary, for either may exist with cutaneous disturbances of the secondary type.

4. By analogy, the interstitial fibroid change, so common in infantile syphilis, would appear in the main to be secondary to a degeneration and necrosis of the hepatic parenchyma, induced by the action of the toxins of the syphilitic virus upon the individual liver cells. In part it is developed in direct association with the development of miliary gummata.

Passing now to the hepatic disturbances in syphilis of postnatal acquirement, we find it more difficult to determine the age and duration of the lesions found, a difficulty due to the fact that syphilis is not in itself a cause of death during the months which immediately follow infection. I know of no adequate study made upon the livers of those who, suffering from well-marked secondary symptoms, have succumbed to intercurrent disease or accident. A thorough investigation of the visceral changes occurring in the secondary period remains as much a desideratum to-day as it was in the seventies, when Jonathan Hutchinson called attention to this gap in our knowledge. It is, however, probable that in the vast majority of cases the liver is not gravely affected during this stage, for otherwise it is most unlikely that with the vast number of autopsies made annually a fair number of instances of death during this period should not have been investigated; so that any marked departures from the normal in the condition of the organ should by now have gained recognition. It is equally true that there might be a certain amount of disturbance—the existence of miliary gummata, or, again, of a moderate extent of parenchymatous degeneration—which might easily escape detection, or be ascribed to other causes.

Some few cases are on record of extensive hepatic derangement during the secondary state. Thus, Hilton

Fagge* reports the case of a female of twenty-three years in whom there was a history of syphilitic rash with loss of hair and macular syphilides; jaundice supervened and the patient became drowsy and comatose. At the autopsy, the liver, which weighed forty-six ounces, was of an opaque bright yellow color and of dense consistency. The surface was mottled, the left lobe resembling very closely that of the infantile syphilitic liver. On section the organ appeared pale and semipellucid, and macroscopically the parenchyma was seen to be replaced by connective tissue. Unfortunately, the description given does not extend to full details. But clearly here is a case of generalized cirrhotic change in secondary syphilis not unlike that found in the infantile disease.

Somewhat similar cases are recorded by Engel-Reimers,† Kratz,‡ and Neumann.§ In all these cases there was a condition not unlike subacute yellow atrophy. Engel-Reimers considered the condition due to enlarged lymph glands at the hilus. While these might cause icterus, it is difficult to see how they could bring about a general atrophic condition of the organ; the explanation is clearly inadequate. Neumann's case is distinctly interesting; it is that of a man of twenty years, ill for about eight months. When seen, in March, 1894, there were papules on the external genitalia and buccal mucosa, and a slight icterus. The jaundice became intense, with great abdominal pain and ecchymoses. The liver diminished, and in nineteen days the patient died with uræmic symptoms. To me the special interest lies in Kolisko's diagnosis at the autopsy, which was that of "catarrhal icterus with cholemia; regeneration of the hepatic parenchyma in the form of adenomatous tumors, following upon acute atrophy of the same." Here was evidently acute generalized hepatitis. According to Neumann, Dittrich collected forty-six cases of syphilitic hepatitis, and those in the main were from the secondary period of the disease. An observation by Bee|| would seem to indicate that such hepatitis, even when somewhat chronic, often leading to extensive trouble, may undergo complete absorption, or, at least, may be followed by no gummatus development.

It will be noticed that in the above cases jaundice manifested itself. Now jaundice is a not uncommon event in secondary syphilis. Attention has frequently been called to its existence from the time of Küssel and Gubler onward; Lancereaux alone collected twenty-one cases. Within the last two years Neumann, Joseph, and Uhlmann have redrafted attention to its prevalence. I can not but think that this group must

* Hilton Fagge, *Lancet*, vol. 1, p. 17, 1885. London, xviii, 1867.

† Engel-Reimers, *Arch. f. Klin. Med.*, vol. 58, p. 169, 1890.

‡ Kratz, *Beitr. z. klin. Med.*, vol. 1, p. 189, 1894. Path. anat. Section.

§ Neumann, *Monatsh. f. Med. u. Nat.*, vol. 1, p. 109, 1894. I am indebted to Neumann for the two cases of hepatitis.

|| Bee, *Gen. med. des. p.*, vol. 1, p. 188, 1888.

* Marchand, *Cellul. Pathol.*, vii, 1896, p. 272.

† Dr. Jacobs tells me that he has described one of the cases of atrophic cirrhosis in the infant, like Marchand, he was forced to conclude that it must have been of syphilitic origin.

afford another indication of what I have already dwelt upon in connection with infantile syphilis—namely, that the liver, being a great excretory organ, may in certain cases be so injured by the action of syphilitic toxins that parenchymatous and, it may be, catarrhal hepatitis is set up and the jaundice be an indication of the functional disturbances due to this cause. This view appears to be more probable than either of the other suggested explanations, which are that the jaundice is obstructive and due either to specific growths in the bile ducts, or to the pressure of enlarged lymph glands at the hilus of the liver upon the larger bile passages.*

We thus, even in the early stages of the disease of postnatal acquirement, obtain evidence pointing to the existence of generalized effects of syphilis upon the organ. As I have pointed out elsewhere,† a fairly extensive fibrosis, apparently independent of the gummatous developments, is not infrequently to be met with in cases where there is active progressive syphilis long years after primary infection.

Turning now to the more generally recognized evidence of syphilis affecting the liver in the tertiary stage—namely, the gummata—and discussing first the large gummata, which are the most characteristic lesions of acquired syphilis, it must be clearly borne in mind that two distinct conditions are popularly confounded together and both regarded as tertiary manifestations—namely, the fibroid pittings and cicatrices which are the final indications of gummatous deposits in the liver, which remain after complete absorption of the original gummatous mass. We not infrequently come across these disfigurements and distortions in the liver in the bodies of those who for years have presented no indications of active syphilis, and they must, I hold, be regarded as obsolete gummata. Indeed, in one case, upon making microscopic sections through a most characteristic puckering, I found scarce any fibroid tissue left; that also had undergone absorption. On the other hand, we have to recognize gummata with cheesy or gummy contents surrounded by fibrous tissue, which are latent or obsolescent, and others again presenting like characters, but surrounded by hepatic tissue, which under the microscope presents infiltration with small round cells and evidence of progressive syphilis. It is these latent and active gummata which alone are of any importance, for both indicate that the disease, to say the least, has not been eradicated from the system.

The important point to notice is that in one liver we at times meet with all the forms above mentioned. I have come across cases at autopsy showing well-walled cicatrices and puckering of practically obsolete gummata, large, well-defined gummata with necrosed centre, and, upon studying the sections of the liver from

the neighborhood of the latter, I have there seen the irregular minute collections of small round cells which, in an infant's liver, we would have had no hesitation in describing as miliary gummata. These appearances I have seen in the liver of a man dying apparently only between two and three years after primary infection, as again in the liver of another infected fourteen years before death.

The evidence before us all points to the fact that in the adult, as in the infant's liver, gummatous development may occur at any period after the disease has become generalized throughout the body.

From what has already been stated, it follows that the same lesions are to be met with in the adult liver as are recognizable in the organ affected by antenatal disease. There may be:

- I. Large well-formed gummata.
- II. Miliary gummata.
- III. Acute parenchymatous hepatitis (with jaundice).
- IV. Syphilitic cirrhosis.

But clearly the element of time introduces frequently a difference and appearances not seen in the infantile liver. Thus we encounter in addition:

V. Obsolescent gummata: large gummata undergoing involution and absorption, with surrounding and limiting fibroid change and contracture. This is the lesion most often met with, and most typical of the syphilitic liver of the adult.*

VI. Obsolete gummata, represented by puckering and deformity of the organ, with a relatively small amount of fibroid growth radiating from the seat of the previous gummatous formation—and by nothing else.

VII. A further lesion, which must be referred to here—one not seen in the infant †—is the development of tumorlike outgrowths, so sharply defined and so large as not infrequently to lead to the false diagnosis of malignancy. The structure of these masses affords ground for believing them to be the outcome of a slowly progressive centrifugal infection of the liver tissue from an original isolated gummatous focus (or small collection of neighboring specific tubercles), with associated reactive hyperplasia of the liver tissue at the periphery; progressive infiltration of the newly formed parenchyma by miliary gummata and eventual replacement of these last by fibrous connective tissue; so that microscopically these tumorlike outgrowths present an outer layer of liver tissue, infiltrated by collections of small cells, enclosing a dense mass of fibrous tissue with more or less "gummy" degeneration.

* What is the causation of the coarse bands of fibrous tissue radiating from these obsolescent gummata I must leave an open question. It has been suggested that they indicate a tendency for the fibroid change to be developed along the course of the main lymphatic vessels leading from the gummatous focus.

† In this I am mistaken. I owe to Dr. Jacobi (verbal communication) a reference to a case by Cohn (?) of one of these tumorlike formations in the infant presenting all the features here described.

* Neumann (*loc. cit.*) gives a full and interesting study of specific cicatrix.

† Adami, *Montreal Medical Journal*, xxvii, 1898, p. 112.

Time, therefore, is an element causing difference in the appearances of the adult and infantile lesions. But this is not the only one. The other, and yet more distinctive, is the predominance of generalized fibrosis in congenital syphilis, of focal granulosomatous changes in the syphilis of adults.

The explanation of this difference would seem to be that the young liver cell is more susceptible and less resistant to injuries inflicted by toxic substances; it is more prone to degenerate; and, if the view here enunciated be correct (namely, that the fibrosis is largely of the "replacement" type), we have in this feebleness of the young liver cell a sufficient explanation why fibrosis here predominates. With the adult cell it is different. Inasmuch as a main function of the liver is to eliminate toxic substances from the circulating blood, its cells with advancing life become capable of withstanding toxins to a relatively very considerable extent. It is, indeed, remarkable to observe what extreme degenerative changes of the cloudy and even of the fatty type may be observed in the liver cells of an adult rabbit—for example, a few hours after intravenous inoculation of a centimetre of a culture of such a form as the colon bacillus; and yet in the course of a few days (as determined in other rabbits similarly treated) the liver cells may have completely recovered and show no signs of the intense disturbance set up by flooding the system with the bacilli and their toxins.

Thus in the adult (as distinguished from the senile) there is not the tendency for the extreme fibroid change to manifest itself under the action of irritants, which in the young lead to the production of the same.

It may be asked why the liver of the newly born infant more than other organs is susceptible to these degenerative changes. There are, it seems to me, two main reasons: 1. The liver is especially concerned in elimination of toxic substances, and its cells bear the brunt of intoxication by the syphilitic virus. 2. Placed, as it is, between the placenta and the general circulation of the foetus, its cells tend to eliminate toxic materials brought by the umbilical vein; in this way, again, they bear the brunt of intoxication, and at the same time reduce the amount of toxic material capable of acting deleteriously on the other organs. But it must be remembered that other fetal organs may also show fibroid changes.

There is one other factor in the production of specific lesions which so far I have not touched upon, one which, judging from studies made, more especially upon the syphilitic heart and brain, may very possibly be of signal importance. I refer to arterial changes—arteritis and periarteritis. We know, however, practically nothing concerning the part played by this in hepatic lesions. I can therefore mention it and pass it by.

Hence, to sum up: While the changes seen in the adult and infantile syphilitic livers are etiologically and anatomically identical, they may present differences in

in part to their relative duration, in part to the reactive powers of the hepatic parenchyma at different life periods.

LOGICAL ANALYSIS IN THERAPEUTICS.*

By CHARLES E. QUIMBY, A. M., M. D.

THAT body of medical practitioners which claims preeminent right to the title "medical profession" and wears it as a distinctive badge separating its members from all schismatic sects and followers of false prophets, has boasted more loudly of, has clung with greater pertinacity to, and urged with more unfaltering earnestness no other evidence in support of such contention than that of strictly scientific methods in its investigations and in the clinical application of resulting deductions.

The justifying demonstration of this claim should certainly be found, if anywhere, in practical therapeutics. It is just here that the gauntlet has been thrown down by our rivals and the challenge accepted. It may not prove unprofitable, therefore, to consider how far our formulated methods of treatment, to say nothing of individual practice, justify us in claiming the victory.

There can be no question as to the superior scientific character of the principles upon which our therapeutic studies are based, and their results, assumedly, applied in practice. Disease, even with the recognition of specific aetiological factors, has, with us, long since ceased to be an entity, and pathic processes, with a few class exceptions, are now unquestioningly accepted in essence as normal systemic activities, which are simply called into play by irregular, intermittent forces instead of constant influences, but which, nevertheless, may be predicated just as certainly of defined causes as those labeled "physiological." Hand in hand with this transformation in our conception of disease came, as a logical necessity, the study of the physiological action of drugs, and then, supposedly, as an equally imperative consequent, the application of drugs clinically, not as specific agents neutralizing or nullifying disease *per se*, but as definite forces modifying, either positively or negatively, those subjective physical processes by which the system brings about restoration of normal conditions. It is just at this point, however, that practice seems in a measure to have failed to keep pace with precept. That this is so need not be surprising, nor should it be discouraging to the point of despair, for the emanation from an old and unquestioned faith in the presumably established curative power of definite drugs must of necessity be slow; and really so, inasmuch as properly holds to what he has, does not readily doubt of its value, until something else is proven to be better. And, too, we must admit, such old traditions as that of

* Read before the Society of Alumni of the University of Illinois, December 11, 1898.

our grandmothers that "garden celandine is good for jaundice" touch with surprising power the hidden superstitious faith which lurks in even the most scientific mind. But we are too far advanced in the era of scientific medicine to justify the retention of empirical methods, except in rare and isolated cases as unique exceptions, which by their very persistence add lustre to the scientific character of broad principles, and by their demonstrated value reveal the existence of still other therapeutic laws yet to be discovered and formulated. The accusation, however, of our antagonists that we are still wearing the elogs of empiricism, and that our vaunted science is largely tainted with the same toxine, can not be wholly denied, for the proofs are too obvious to admit of concealment.

The simplest and, for that very reason, the most conclusive evidence as to how far pure science dominates our clinical therapeutics is found in two distinct yet closely related conditions.

1. *The Permanency of Methods of Treatment.*—The ultimate conclusions of logical analysis should become established and permanent facts. If, therefore, our physiological and pathological data are true, the dependently deduced therapeutic laws should have a commensurate and permanent value, and the included clinical methods be subject only to relative but not absolute supersedures by products of similar logical analysis. A therapeutic agent should never lose a value once established for it by such scientific methods. Therefore, to set aside as valueless measures to which we have once attributed value is an unreserved confession that either our logic or our facts have been false—neither horn of which dilemma can be largely productive of pride or tortured into a compliment for our intellectual powers. When interrogating the facts, as revealed by prevailing methods of practice, to determine how far permanency of drugs justifies the idea that logical analysis dominates our therapeutics, one hardly needs to instance specific cases.

He who has watched for the past decade that jostling horde of barbaric drugs which, emerging from the sulphurous mists of the chemist's laboratory, have swept across the medical horizon in unbroken column, only to disappear in the silent caverns of oblivion, will hardly care to attack the statement that permanency is not the most obtrusive characteristic of prevailing methods of treatment. We can not refrain, however, from calling attention to the oft-quoted answer of the Edinburgh librarian when asked what medical books could best be packed away in the cellar, "Take anything that is over ten years old."

The same words have done yeoman service in illustrating the rapid advance of medical science, while their bitterly humiliating but none the less directly pertinent testimony to the transitory sway of therapeutic measures which have been boosted into power by personal dicta, only to fall from lack of scientific support, has

been ignored with painfully watchful care. To say more on this point were superfluous.

2. *Formulated Therapeutics.*—Unassailable and most weighty evidence as to the character and influence of our formulated therapeutics should be found in the methods by which young men just from the colleges make selection of drugs and define their application. Older men may readily drift from conscious application of the scientific principle in therapeutics, and their methods become crystallized into seeming empiricism, even from an original scientific solution. But young men, fresh from the teachings of recognized authorities, should then, if ever, exemplify scientific methods.

Yet one can not be brought much in contact with hospital internes without being impressed with the indefiniteness of their ideas regarding the indications for the use of specific drugs, and their uncertainty as to their effect and value. Drugs with them seem to be gathered into classes, not individualized, save as one is made to stand for the class, and their value to be measured solely by the outcome of a given case, rarely by their action upon systemic functions.

With astonishing frequency, too, one finds them connecting these drug classes with special diseases, and with these only. It is rather seldom that they voluntarily attempt any analysis of disease as a complex of temporarily excited but, under the conditions, normal activities, with the object of using drugs to modify and harmonize these conservative forces. Some years since I found my house physician, an unusually good man too, with a list of all the cathartics, which he was testing to see "how soon they came through." And another member of the staff asked which I considered the best heart tonic, strychnine or digitalis. Such experiences, however, cease to be surprising when we examine current works on practice for definite directions, based on physiological action, for the use of drugs.

What we find, or rather fail to find, doubtless should not be regarded as indicating any lack of knowledge. On the contrary, the surprising absence of precision of statement indicating the dependence of the values and applicability of drugs upon their influence on special functions seems rather to be the result of overfamiliarity with the subject, and a consequent unwarranted, even if complimentary, assumption of knowledge on the part of the student.

I will limit myself to two typical illustrations in support of the foregoing statements, strychnine and oxygen as used in pneumonia. If one goes back even ten years he will find hardly any mention of strychnine in the treatment of pneumonia in the works then current. Yet its physiological action was as well known then as now, and an analytical study of the pathic processes in pneumonia should have disclosed its value and defined the indications for its use.

Passing to works issued during the strychnine boom, while it finds a place in all, one looks in vain for ex-

plicit directions for its use. It is simply described as a cardiac tonic or stimulant. The same statement fairly defines its consideration in even the most recent systems of medicine. Of these, one which justly holds a position among the leading American authorities dis-misses it with the statement that "the indications for its administration are the same as those requiring alcohol." While others lay more stress upon its value, some even affirming its superiority to all other heart tonics, their statements as to the nature of its action and the indications for its use are no more definite, but seem rather to ascribe its superior value to difference in degree, not character, of action.

In one English system, corresponding to the American work quoted, we do find definite reference to its influence upon nerve centres; but our awakened hope of logical deductions sharply defining its applicability and differentiating it from other heart tonics is rewarded only by the hesitating and obscuring statement that "it is most valuable in heart failure when alcohol seems useless or even mischievous to the patient." "Who shall decide when authorities thus disagree?" Can it be true that our therapeutics is so devoid of science that we must experiment with each patient before knowing whether to use strychnine, alcohol, or digitalis? Or is it true that the physiological action and hence therapeutic value of all these drugs are the same? Are there no conditions of functional derangement which render the one more effective than another? If so, then let us honestly though mournfully confess that even *similia similibus curantur* is to be preferred.

Yet certainly it is true that cases of pneumonia evince wide variations in their manifestations of systemic depression. That case which is ushered in with severe circulatory disturbances, capillary and venous turgescence, irregular, uneven pulse, and passes quickly to a condition of stupor, with irregularly fluctuating temperature, surely can not be considered the equivalent, clinically, of another where the mind is clear until the last, and the pulse begins to waver in rhythm and force only with the advent of secondary invasions or oedema. We can not help believing that the former, with its profound depression of reflex centres, as obviously and definitely demands strychnine for the stimulation of these centres, and contraindicates alcohol, as the other requires alcohol without strychnine for the support of the excessive muscular and fibrile activities. In the one the heart fails from the first through loss of central contractility; in the other, only after a long struggle from simple exhaustion of muscular power.

It may be objected that this differentiation is foolish. I can not admit it; nor do I hesitate to say that the recognition of strychnine as a stimulant of reflex centres, and of alcohol as supplying force for the fibrile processes, affords at least a logical, if not the only rational, scientific basis for their use as heart tonics in the treatment of acute diseases. Certainly, until leading

authorities cease to be absolutely contradictory in their therapeutic dicta, we may wisely refrain from citing clinical results in proof of the scientific character of our methods.

When we pass to the consideration of oxygen there is revealed a similar and even greater indefiniteness of statement as to the indications for its use and the limitations of its applicability.

I have taken pains to question many young men on this point, and have yet to find one who had ever thought of oxygen as having any other effect than that of supplying a deficiency in the blood, or whose administration of the gas was controlled by a consideration of all the functions of respiration as applied to the pathic conditions existent in pneumonia.

For a long time there has prevailed a well-recognized and often plainly spoken doubt among medical men as to the value of oxygen which is the legitimate result of clinical experience. No more significant or pertinent comment can be made than the following quotation from Allbutt's *System*: "When dyspnea is urgent and the patient apparently dying of cyanosis (?), the inhalation of oxygen is a rational mode of treatment and has been advocated for many years past, and it sometimes proves remarkably useful. It seems never to do any harm (?), and it is a matter of surprise that its effects are not more uniformly and obviously beneficial. *It is possible that we have yet to learn how to use it most efficiently.* At present it takes its place among the adjuncts of successful treatment." If this is all we find in such an unquestionably scientific work, what hope can one have to look further? I shall be indebted for the reference to a standard work on medicine where attention is called to the facts that respiration is concerned quite as much in the elimination of carbon dioxide as in the absorption of oxygen, and that the increased rapidity of respiration in the early stages of pneumonia is not due solely to decreased lung capacity, but in part to an augmented systemic demand for oxygen to supply the fibrile processes; or to one which, without reference to these physical facts, makes it plain that, since the exciting cause of respiration is deficiency of oxygen in the blood, too free administration of the gas, through the removal of this stimulus and a consequent diminution of respiration, results in coincident lessening of the elimination of carbon dioxide and corresponding increase of carbonic poisoning; an increase of the very condition which, in a large proportion of cases where oxygen is used, is the primary cause of heart failure and death; the contradiction, too, for the specific antagonism of which we use strychnine.

Unfortunately as a physician, the value of oxygen may be, we are not to doubt, a great one; even this to the extent of producing such a potent narcosis. Nor may we permit our satisfaction at a somewhat diminished respiration followed by disappearance of cyanosis to blind us to the rapidly developing pallor and mental

torpor which presage central paralysis from carbonic poisoning. That these criticisms on the use of oxygen are justified we must maintain, for we have seen it given to the point of producing Cheyne-Stokes respiration and coma—conditions which disappeared when it was withheld.

Yet it should be possible to obtain its valuable action without the production of more than counterbalancing injurious effects.

Upon the basis of its relation to respiration, it seems evident that it should not be reserved until the later stages of the disease, for moments when the patient is *in extremis*; when rapidity of respiration is due to cardiac failure and diminished respiratory area, which is quite as inadequate for the excretory function as for oxygen absorption. At such times its use represents a choice between two evils, and its value is limited to the least possible reduction of respiration which will suffice to avert muscular respiratory exhaustion. Even in these moments of crisis we may often distinguish between conditions due primarily in one case to lack of oxygen or in another to carbonic excess, and thereby modify our use of oxygen.

Its greatest value, therefore, is evidently in the early stages, when the suddenly developed and intensified functional activities of the febrile processes entail an augmented oxygen consumption which is supplied from the decreased respiratory areas only at the cost of cardiac and respiratory strain. If given persistently and in minimum doses, therefore, from the onset of the disease, oxygen should and, I am convinced from a moderate experience, does produce very definite and satisfactory results, not only immediate, in modification of the pathic processes, but contingently, in minimizing those later conditions of crisis which alone are commonly accepted as indicating its use. I believe that when used thus, in harmony with the entire physics of respiration and pneumonia, oxygen will attain its legitimate position in the therapeutics, not only of this, but of allied diseases as well.

Further illustrations are unnecessary to make clear the point at issue, which is simply that in the confusion attending the deluging storm of new drugs which has marked the past decade, the inevitable rush to adopt the best has been productive of superficial analysis of cause and effect, even if it has not at times entirely obliterated logical processes controlling forces in our therapeutic work, not only with the new but also with old, established drugs. My plea, then, is not for more knowledge, but simply for a more *scient* title and exhaustive analysis of the facts in hand, to the end that our clinical therapeutics may keep pace, *non de nomine, sed de facto*, with abstract scientific investigation, and thereby unqualifiedly merit that laurel crown which should ever be reserved for and bestowed only upon manifest power to control disease and relieve suffering.

REPORT OF A NECROPSY IN A CASE OF ACROMEGALY, WITH A CRITICAL REVIEW OF THE RECORDED PATHOLOGIC ANATOMY.

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AND

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(Continued from page 521.)

PART II.

By Dr. LE COUNT.

THE variety of titles under which the few pre-Marie cases of acromegaly were reported form a curious illustration of the trend and evolution of medical thought.

Sauccrotte and Noël in 1772 and 1779 reported a case as "considerable enlargement of the bones in an adult person." Alibert, in 1822, described an instance of acromegaly in a scrofulous giant. In his work on the physiology of the nervous system, Magendie, in 1839, referred to two cases as examples of "hypertrophy." The case described by Chalk in 1855 received its title from a complication, "partial dislocation of the lower jaw from enlargement of the tongue." Friedrich in 1868 entitled two cases "hyperostosis." Verga (1869) and Tarulli (1879) reported cases which, from the facial enlargement, were called *prosopectasia*, and Lombroso in 1869 described a case under the title of *macrosonia*. To the credit of Brigidì belongs a case reported in 1877 as "anatomico-pathological studies of a man who became strangely deformed."

Langer, in 1872, gave to the scientific world some excellent descriptions of the skulls of acromegaly. Henrot, in 1877 and 1879, from the changes in the skin, reported a case of acromegaly as *myxedema*, and Fritsche and Klebs (1884) a case as giant growth ("*Riesenwuchs*"). Hadden and Ballance, in 1885, showed a case to the Clinical Society of London as an example of "hypertrophy of the subcutaneous tissues of the face, hands, and feet." Concerning some of these cases the descriptions are too brief to accept them without reservation as undoubted cases of acromegaly, and in almost all the details also are too deficient to include them in any general review.

It remained for Pierre Marie, in the year 1886, under the comprehensive title, *Two Cases of Acromegaly, an Unusual Non-congenital Hypertrophy of the Upper and Lower Extremities*, to definitely name the condition recognized by a few previous observers and to establish its value as a clinical entity. As acromegaly the disease is now recognized, and many observations have not only corroborated the distinctness with which it exists, but have also broadened our knowledge concerning it.

Its relation to gigantism has been studied by Langer, Massalongo, Dana, Brissaud and Meige, and others; to exophthalmic goitre, by Lancereaux, Magnus-Levy, and

Murray. Its frequent combination with diabetes has been commented upon by Hansemann, Pineles, and Dallemange. The differences between acromegaly and leontiasis ossium or crania progenea have been elaborately dwelt upon by L. Meyer, Virchow, and Zuckerkandl. Cretinism and myxœdema, in which the hypophysis is sometimes diseased and the sella turcica enlarged, have been more clearly isolated from acromegaly by the work of many writers (*e. g.*, Boyce and Beadles, de Coulon, Schönmemann, and others).

The clear conceptions of acromegaly thus obtained have been instrumental in bringing to light much new knowledge by the promotion of accurate and more scientific observations and some valuable researches, experimental and otherwise.

Reference may be made in this connection to the work of Boyce and Beadles, of Rogowitsch, Schönmemann, Comte, and Howell.

Notwithstanding the numerous clinical and anatomical observations which have been made, and the efforts to place the origin of acromegaly upon some positive basis, attempts to formulate any idea of its pathogenesis from a detailed consideration of its pathological anatomy meet with much discouragement. The recorded autopsies are too few; they exhibit so many evidences of non-uniformity and incompleteness in detail and description, and in many we have only a few generalized descriptions from which to derive data. For these reasons only such features of the pathological anatomy of this disease will be considered as have occurred in sufficient numbers to warrant their being accepted as more or less constant characteristics. At the same time an effort will be made not only to draw attention to some heretofore neglected features of the morbid anatomy, but also to point out the relationship existing between the disease processes of acromegaly and a few other conditions.

The enlargement of the bony skeleton at certain points has become so well known, and has been so frequently described from the purely anatomical standpoint, that a recapitulation of these alterations would be useless. There is a much greater need for accurate descriptions of the histological changes in the bones. The instances where such changes have been described are too few in number and often limited to a single bone or to a few bones.

The enlargement of the viscera has been spoken of as "aplanchno-megalic." Not enough attention has been directed to this aspect of acromegaly. The marked enlargement of certain organs should certainly merit a more careful inquiry into its cause, and it is safe to say that in degree and constancy this increase in size is to be met with in no other condition.

The Liver.—As regards the liver, in twelve necropsies it is not mentioned at all; in nineteen, it is enlarged; in eight, normal. Of the three remaining cases, one is referred to as "small," one contained carcinoma

nodules, and one is dismissed with the term "fatty." The enlargement has seldom been placed in exact terms, as will be seen from the following: Bournville and Regnault, 4,300 grammes; Brooks, 3,770 grammes; Osborn, 3,230 grammes; Fritsche and Klebs, 2,800 grammes; Dana, 3,710 grammes; Thomson, 3,510 grammes; Dallemange (I), 5,910 grammes; Dallemange (II), 1,630 grammes; Schultz-Jores, 4,700 grammes; Mitchell and Le Count, 3,530 grammes; Linsmayer, enlarged, thicker than normal; Hansemann, large; Bonardi, enormous; Holsti, 39×23 centimetres; Hutchinson, slightly hypertrophied; Fratnich, very much enlarged; Pineles, somewhat swollen; Dalton, enlarged; Smith, general enlargement.

The microscopic examinations are also very meagre; connective-tissue increase and fatty degeneration are the changes which predominate in the few examinations made.

The Spleen.—The enlargement of the liver is no less striking than is the enlargement of the spleen.

Among twenty-five necropsies in which the spleen is mentioned, it is found enlarged in nineteen. This enlargement is very much marked: Thomson, 400 grammes; Dallemange (I), 920 grammes; Osborn, 1,000 grammes; Fritsche and Klebs, 750 grammes; Hutchinson, 900 grammes; Schultz and Jores, 880 grammes; Mossé and Daunie, 870 grammes; Brooks, 370 grammes; Mitchell and Le Count, 450 grammes; Holsti, 21×15 centimetres; Claus and Van der Stricht, $20 \times 10 \times 7$ centimetres; Roxburg and Collis, 19×10 centimetres; Strümpell and Zenker, $18 \times 10 \times 5$ centimetres; Fratnich, larger than normal; Henrot, hypertrophied; Bonardi, twice the normal size; Linsmayer, three times the normal size; Dalton, enlarged; Smith, general enlargement.

Of the remaining cases, in one it is mentioned as small; in one case the weight was 160 grammes; in another, 145 grammes; in still another, 200 grammes. In the case reported by Boltz and Fraenkel, the size is given as $13 \times 7 \times 3.5$ centimetres. In three cases it was stated to be normal or unchanged.

The Kidneys.—The kidneys are also found enlarged, as a rule.

In thirty necropsies, in which their condition is referred to in any way, they are found enlarged twenty-one times. This enlargement is considerable in the majority of cases, as shown by the following list: Brooks, weight together, 680 grammes; Johnstone and Monroe, weight together, 365 grammes; Hunter, weight together, 530 grammes; Bonardi, right, 210 grammes—left, 222 grammes; Schultz and Jores, right, 400 grammes; left measured $16 \times 9 \times 5$ centimetres; Osborn, right, 310 grammes—left, 225 grammes; Fritsche and Klebs, right, very large—left, 275 grammes (smaller); Dana, right, 365 grammes—left, 400 grammes; Thomson, right, 310 grammes—left, 380 grammes; Dallemange (I), right, 550 grammes—left, 620 grammes; Mitchell and Le

Count, right, 360 grammes—left, 300 grammes; Strümpell-Zenker, left measured $17 \times 11 \times 4$ centimetres; Holsti, left measured 14×7 centimetres—right, same size; Linsmayer, somewhat enlarged; Hansemann, large; Roxburg and Collis, both enlarged; Bailey, both large; Pineles, swollen; Henrot, left kidney hypertrophied; Frasnich, larger than normal; Dalton, enlarged.

The Heart.—We find the heart mentioned more frequently. It is found enlarged to the following extent: Bourneville and Regnault, 750 grammes; Brooks, 425 grammes; Bonardi, 650 grammes; Dallemenge (I), 885 grammes; Dallemenge (II), 830 grammes; Worcester, 540 grammes; Gauthier, 400 grammes; Fritsche and Klebs, 550 grammes; Osborn, 1,160 grammes; Dana, 650 grammes; Mitchell and Le Count, 450 grammes; Linsmayer, diameter, 19 centimetres—length, 15 centimetres; Strümpell and Zenker, diameter, 10 centimetres—length, 15 centimetres; Holsti, diameter, 17 centimetres—length, 16 centimetres; Schultz and Jores, much enlarged; left ventricular wall, 2.5 centimetres; Wolf, enlarged; Rathmell, hypertrophied; Thomson, large; Brigidi, heart dilated, aortic insufficiency; Frasnich, enlarged; Hutchinson, slightly enlarged; Sigurini and Caporiaco, hypertrophied; Claus and Van der Stricht, slightly hypertrophied; Bailey, moderate hypertrophy; Dalton, enlarged.

This enlargement of the heart is very remarkable. If it is true, as Howard claims in his article on Heart Hypertrophy, that the size of the heart in compensatory hypertrophy may be considered as an index to the amount of obstruction which is being compensated for, then in the majority of cases of acromegaly there is an increased resistance in the circulation.

A study of the tables given by Howard also shows that arteriosclerosis is the most frequent cause of heart hypertrophy, and that the increase in the weight of the heart in such cases is very startling.

However, enlargement of the heart is not a constant characteristic of acromegaly, for in eight cases it does not occur. Hansemann, brown atrophy; Mossé and Daunic, not increased in size; Roxburg and Collis, normal; Dallemenge (III), atrophied; Henrot, a curious atrophy of the heart and blood-vessels; Boltz-Fraenkel, width, 11.5 centimetres—length, 11 centimetres; Pineles, contracted; Johnstone and Monroe, 255 grammes.

The Thyroid Gland.—A great deal of attention has been paid to the condition of the thyroid gland in this disease. Furnival states that the thyroid has been examined in twenty-four cases, and found normal in only five; further, that it is hypertrophied in more than one half of the twenty-four. The following list will indicate more clearly that enlargement has been quite generally observed: Osborn, 101 grammes—an accessory thyroid weighed 36.5 grammes; Dana, 120 grammes; Squance, 60 grammes, enlarged; Bailey, 84 grammes; Mitchell and Le Count, 70 grammes; Smith, 180 grammes; Holsti, much enlarged; Henrot, four or five

times too large; Fritsche and Klebs, increased in size; Gauthier, enlarged; Wolf, enlarged; Hansemann, some enlargement; Mossé and Daunic, increased in size; Brooks, symmetrically enlarged; Strümpell and Zenker, enlarged; Schultz and Jores, much enlarged; Boltz and Fraenkel, considerable enlargement; Furnival, slightly enlarged.

The thyroid gland has been found, according to the necropsy reports, as reduced in size, four times; as cystic or the seat of colloid degeneration, twice; and as normal in appearance, five times. In the remaining cases no mention of its condition is at hand.

The Thymus Gland.—As regards the thymus gland, to which attention has been especially directed by the researches of Klebs, it has been found persistent eight times, as follows: Squance, 56 grammes; Mossé and Daunic, 13 centimetres long; 4 centimetres wide; Roxburg and Collis, 9 centimetres long, 4 centimetres wide; Brooks, 6 centimetres long, 2.5 centimetres wide; Schultz and Jores, 13 centimetres long, 8.5 centimetres wide; Fritsche and Klebs, projected up to the thyroid; Holsti, imbedded in a mass of fat; Dalton, persistent.

The thymus has been noted as absent eighteen times. No mention of it is made in the remaining cases.

Concerning the other visceral changes, too few data are at hand to draw any conclusions from, but it is interesting to note that in the eleven cases in which the stomach is mentioned, six refer to an enlargement of the organ; also that the adrenals are spoken of six times, twice being dismissed with the mere statement, "normal." Once they are described as "thin," once as having undergone fatty degeneration, and twice they are stated to be enlarged. In the present case the adrenals weighed together thirty-six grammes.

The Hypophysis.—The few good descriptions of the histologic changes in the hypophysis are remarkable in view of the prevalent opinion that changes in this body are responsible for the disease. In many cases no microscopic examination is recorded; in many others we are forced to accept the conclusions of such examinations. These deficiencies are in marked contrast to the almost universal statements concerning an enlargement. The following list shows that not only is enlargement the rule, but that great variation exists: Dana, weight, 4.5 grammes; Worcester, weight, 58 grammes; Gauthier, weight, 13 grammes; Sigurini and Caporiaco, weight, 300 grammes; Rathmell, weight, 30.76 grammes; Bonardi, weight, 2 grammes; Comini, weight, 10 grammes; Mossé and Daunic, weight, 36 grammes; Bailey, weight, 8 grammes; Tamburini, length, 53 millimetres; breadth, 29 millimetres; thickness, 20 millimetres; Hansemann, breadth, 30 millimetres; height, 20 millimetres; thickness, 25 millimetres; Brooks, antero-posterior diameter, 15 millimetres; height, seven millimetres; Schultz and Jores, antero-posterior diameter, 40 millimetres; height, 20 millimetres; breadth, 40 millimetres; Holsti, antero-posterior diameter, 25 millimetres;

transverse diameter, 30 millimetres; Henrot, antero-posterior diameter, 30 millimetres; transverse diameter, 42 millimetres; Thomson, four or five times normal size; Brigidì, marked enlargement; Dallemange (I), size of a pigeon's egg; Dallemange (II), size of a cherry; Dallemange (III), a little tumefied; Squance, considerable hypertrophy; Roxburg and Collis, size of a walnut; Wolf, size of a goose egg; Caton and Paul, size of a Tangerine orange; Uthoff, extended into the third ventricle; Bourneville and Regnault, compressed the optic chiasma; Strümpell and Zenker, size of a walnut; Claus and Van der Stricht, $32 \times 12 \times 21$ millimetres; Boltz and Fraenkel, a cherry-sized tumor; Pineles, size of a cherry; Johnstone and Monroe, hypophysis large; Hutchinson, enlarged; Hunter, twice as large as normal; Rolleston, size of a walnut; Lawrence, size of a cherry; Smith, 7.5×6.4 centimetres.

In five necropsies no mention is made as to the size of the hypophysis, or of the tumorlike growth which occupied the position of this body.

The enlargement has been attributed to a variety of conditions. Most of these have to do with true tumors; some, however, are attributed to simple hypertrophy; in other cases competent observers have with praiseworthy honesty confessed their inability to decide between tumor formation and hypertrophy.

The thought suggests itself at this point, that if accurate histologic descriptions of these growths had been recorded, we would not find acromegaly ascribed to such a variety of pathologic changes in the hypophysis, and that some general laws could be formulated which would govern the variety of gross anatomic conditions observed.

In 1897 Tamburini, in a *résumé* of the findings in the hypophysis, declares that in thirty necropsies there was always an enlargement of the hypophysis, and that this enlargement is usually due to a simple hypertrophy, or to a complete adenoma, in which the principal elements of the organ are preserved. Hence he concludes that acromegaly does not depend upon abolition of any function of the hypophysis, since it is never observed in instances of atypical tumors, but that it does depend upon an excessive function of that organ.

Hansemann has also recapitulated the conditions met with in the hypophysis, and in forty-eight necropsies finds tumors recorded thirty-two times. Sternberg gives the changes recorded in the hypophysis as follows: Simple hypertrophy, twice; adenoma, seven times; hypertrophy and colloid degeneration, once; marked colloid degeneration and hemorrhage, once; cystic tumor, twice; sarcoma (variety not specified), five times; sarcoma or glioma, once; spindle-cell sarcoma, once; cylindroma, once; round-cell sarcoma, once; large-cell sarcoma, six times; glioma, once; adenoma (without enlargement), once.

From the summary of Schütte the following are gleaned: Simple hypertrophy, twice; adenoma, eight

times; lymphosarcoma, five times; glioma, once; glioma and round-cell sarcoma, once; colloid degeneration and hypertrophy, twice; sarcoma (variety not specified), nine times; cystic, four times.

From a comparison of these summaries it will be at once apparent that sarcoma and adenoma are the most frequent conditions reported. It is also apparent that acromegaly does not accompany any single pathologic change in the hypophysis. If any further evidence were needed to corroborate the last assertion, some of the more complete histologic descriptions of the cases in which sarcoma has been described will serve the purpose.

Strümpell and Zenker report a tumor made up of large round or polygonal flattened cells, with large, centrally located nuclei. Some possessed two or three nuclei, and at many points the cells were in contact. Around the large blood-vessels the tumor cells were numerous and somewhat columnar. At the upper part of the growth the appearance was more like the normal hypophysis; below it was more like sarcoma. The tumor had invaded the bone. In Wolf's case hyaline degeneration of the blood-vessels was observed. Sternberg places this growth among the cylindromas. The tumor cells were the size of red blood-corpuscles and round; the bone was eroded.

Dallemange (Case I) describes a sarcoma surrounded by a firm fibrous capsule.

Mossé and Daunic observed in their sarcoma a framework of fine bands of connective tissue and many newly formed blood-vessels. The tumor cells were fusiform, with undulating ends, and round or oval nuclei were occasionally grouped in bunches. The fibrillation of the cells was very marked. Claus and Van der Stricht observed a substitution of lymphoid tissue for the hypophysis. They state that it mostly resembles a lymphosarcoma, but also describe a network rich in capillaries immediately in contact with *glandular tubes* (italics ours). The large tumor described by Sigurini and Caporiaco as a lymphosarcoma possessed a distinct capsule, and fibrous trabeculae extending into it. There is no mention of invasion or erosion of bone.

Schultz and Jores, in a case where they were unable to decide between hypertrophy and adenoma, state that the central part of the growth had the appearance of an angiosarcoma.

Another large growth observed by Caton and Paul, and diagnosed as round-cell sarcoma, possessed a distinct capsule, which had become perforated at one point. The growth was soft and dotted with hemorrhages. The growth described by Roxburg and Collis was found to possess characteristics midway between sarcoma and glioma. Hansemann has described "a sarcomatous struma." It consisted of large oval cells, fine intercellular substance, marked fatty degeneration, and considerable development of blood vessels.

Through the courtesy of Dr. J. R. Ruttmel, of Chattanooga, Tennessee, I am able to include a description

of the growth in the case reported by him,* which had been preserved in alcohol.

(To be concluded.)

THE TREATMENT OF SYPHILIS.†

By BOLESŁAW LAPOWSKI, M.D.

THE development of bacteriology has had a marked influence on the treatment of infectious diseases, not only causing us to abandon, in both acute and chronic cases, those remedies which were sanctioned by the weighty authority of clinical observation, but also inducing us to leave the course of these affections to "mother Nature" until a remedy, acting on Nature's own principles, should be offered us.

Syphilis alone among all chronic infectious diseases has withstood the attack of the new trend in medical science; not only do we not trust to "natural help," but we interpose with mercury, a remedy which is inimical to all organized life. Attempts have been made to supplant this remedy by a serum (1) supposed to contain elements kindred to those which Nature uses for her defense, but after a very brief trial it was consigned to an oblivion from which, let us hope, it may emerge with brighter prospects of success.

Until this hope is realized mercury must reign supreme in the treatment of syphilis, since it has for centuries proved itself to be an indispensable factor and an invaluable means of securing to the patient life and health. It is justly appreciated as the best, perhaps the only, known means for maintaining this health and life, an opinion embodied in every standard medical treatise on syphilis by common consent of all syphilographers.

But right here the syphilographers cease to agree. When the questions are brought to the forum of medical men—when to begin the administration of mercury? how long to continue the treatment? what is the best preparation of the drug? and by what method to introduce it into the system?—the answers are so confusing, the arguments so contrary, that thinking physicians naturally look to the physician's physician, the laboratory savant—ordinarily shunned, but heartily welcomed in the day of trial—"to be," as Lord Bacon says, "the light to open their eyes to see their ways through the labyrinth, and find the clues that shall conduct them to the truth."

Our savant may, then, discover the syphilitic virus, and, should he do so, does this presuppose, or even promise, that the remedy shall be simultaneously discovered? And when this last result is obtained will the tocsin

"Ring out the old

And ring in the new" treatment?

* *Journal of the American Medical Association*, 1897, vol. xxviii, p. 549.

† Read before the Genito-urinary Section of the New York Academy of Medicine, March 11, 1899.

Meanwhile, what are we to do? Let us see if no basis is to be found upon which we can build our plan of treatment. Can we not obtain certain principles from the classified results of countless observations of the course of syphilis during its centuries of existence and construct upon them a basis for the treatment of syphilis?

Having had during the last twelve years of my practice the opportunity to study the effects of various preparations of mercury administered in different ways—in form of inunctions and hypodermic injections during my five years' service in the department of skin and venereal diseases of the general hospital in Warsaw, as first assistant to Dr. Antoni Elsberg; and in form of internal administration by mouth and sometimes by inunctions, during my seven years' experience in this city, in the outdoor departments of the New York, Presbyterian, and Skin and Cancer hospitals—I have come to appreciate the method of inunctions as the one which is necessary to apply in severe cases of syphilis, and advisable to use in the usual forms of the disease, owing not only to the better results obtained by this method, but to the absence of the drawbacks which are inherent in the other methods.

I will now endeavor to bring before you the principles upon which this conclusion is based.

The safest guides in the administration of mercury to a syphilitic patient are the action of mercurial preparations upon the syphilitic virus and their effects upon the human organism.

The first requirement may be fulfilled by mercury in two ways: First, by killing the specific agent and neutralizing its toxine, from a direct and antiparasitic action; second, by increasing the defensive power of the human organism by stimulating the functions of the organic elements to produce an antitoxine, and thus, in an indirect manner, to enable the system to overcome the depressive tendencies of the syphilitic poison (2).

That mercury does not act as a direct antiparasitic remedy in syphilis is made more than probable from a consideration of the following points:

First. In countries where for centuries syphilis has been treated by mercury the number of victims of syphilis is not diminished.

Second. In countries where syphilis is rarely or never treated by mercury the number of syphilitics is not increased. The hygienic conditions of the inhabitants of both countries are presumed to be the same.

Third. The presence of mercury in the system neither protects an individual from being infected with syphilis (as shown in cases unsuccessfully treated with mercury for mistaken syphilis, the patient during the treatment acquiring syphilis (3), and in workers in factories where mercury is used, who acquire syphilis even during their stay in the factories), nor does the administration of mercury prevent a relapse of the syphilitic symptoms during the time of its administration.

Fourth. Mercury has a beneficial action in other diseases, as epithelioma, lupus (4), psoriasis (5), and lepra (6).

Fifth. Other remedies, especially irritants, also modify the syphilitic eruption, sometimes even producing salivation, which does not clinically differ from mercurial salivation (7).

Sixth. Both syphilis, in certain periods of its development, and mercury attack the same cell centres, producing manifestations upon the skin and mucous membranes which are clinically so much alike that the decision whether they are due to syphilis or to mercurial poison sometimes tasks the diagnostic powers of the most skillful clinician. As to the effects of mercury upon the human organism, they depend upon the amount of mercury introduced into the circulation; and consequently that method meets our approval which enables us to administer the largest amount of mercury in the safest manner.

We have different ingenious methods of introducing mercury into the organism, but we have none by means of which we can trace its passage through the human body, and this gives rise to the difference in opinion concerning the manner and chemical form in which mercury is absorbed. The opinion of some, that when mercury once enters the system it is absorbed as a double chloride of mercury and sodium (Miahle), is not accepted by others, who maintain that it is taken up as an albuminate of mercury (Voit).

Others (Rabuteau, Merget, Anuschat), again, hold that it circulates in the body juices as a mercurial vapor, in the form of very minute particles of metallic mercury; and this opinion is upheld by chemical investigations upon mercury outside of the human body, and by observations of its changes while remaining in the human or animal organism.

This is demonstrated especially regarding sublimate and calomel:

First, by Anuschat's observations, which show that the action of sublimate in the system is due to hydrogen and oxygen *in statu nascendi* (8).

Second, by microscopical and chemical demonstrations of Justus, who found in the blood of a syphilitic patient who was treated by intravenous injections of sublimate "grayish-black granules, which must be considered as the reduced mercury in its metallic form" (9).

Third, by Smirnof's demonstrations of globules of metallic mercury after hypodermic injections of calomel in syphilitic patients (10).

Fourth, by numerous experiments upon animals, which showed that nearly every combination of mercury, even calomel itself, when injected hypodermically, is decomposed, forming minute globules of metallic mercury around the area of the inflamed nodule (11).

Furthermore, this opinion is sustained by clinical evidences of the action of different mercurial prepara-

tions upon syphilitic manifestations. All syphilographers agree that preparations of metallic mercury exercise the best action upon the syphilitic virus, and that by their aid we can obtain good results in severe cases where other mercurial preparations have failed to exercise any influence upon the syphilitic virus (12).

Moreover, that mercurial compound acts quicker and better which contains the largest amount of metallic mercury and from which the system extracts the largest quantity of the metallic element present in that particular preparation, dependent also upon the individual tendency to absorption and upon the length of time the remedy stays in the system. Thus, a given dose of calomel, containing eighty-five per cent. of metallic mercury, acts more surely than a dose of sublimate, which contains seventy-three per cent. of metallic mercury, owing to the fact that sublimate remains a shorter time in the human body and is eliminated sooner than calomel, thus leaving the system before its metallic mercury is extracted.

We see, then, that the mercury which is brought into circulation will exercise its influence upon the syphilitic poison according to the amount of metallic mercury the system can and does extract from the preparation.

All therapeutic preparations of mercury contain metallic mercury either in plain globular form or in some other chemical combinations.

Let us consider whether it is of more advantage to introduce the plain metallic mercury or its chemical combinations, out of which the patient's organic laboratory will extract the desired metal. The mercurial preparations can be introduced endermically, hypodermically, *per os*, by means of intravenous injections, or by inhalation. The best way, according to our standpoint, would be to introduce mercury by fumigations, as by this method it is at once brought into contact with the skin and mucous membranes in the most active form—viz., vaporized mercury. But the dangers which are connected with this method, as severe stomatitis, laryngeal spasm, and even in some instances death (13), make us forego its advantages and look for a safer and easier but not less efficacious procedure.

The next method which should attract our attention would be intravenous injection of mercurial preparations, since it introduces into the circulation an exact amount of mercury, which, being at once transported to all parts of the system, will have a prompt effect. But, as up to the present time nobody, to my knowledge, has injected either metallic or insoluble mercury into the human venous system, and as my own experience with soluble intravenous injections is limited, I must now refrain from considering this method.

The advantage of being able to administer a precise dose with no immediate inconvenience to the patient would attract our attention to the third method—namely, *per os*, by means of which mercury is administered either in solution or in pill form. Here the prepara-

tions of mercuric and mercurous oxides, the double combinations, and metallic mercury are used.

The disadvantage common to the first four preparations, as compared with metallic mercury, is, that the organism, before deriving any benefit from the preparation, has to decompose it into metallic mercury prior to its removal in the faeces.

As a larger amount of metallic mercury can be made use of with less strain upon the digestive organs by taking the blue pill or gray powder, we shall easily understand the choice of and faithful adherence to the blue pill and gray powder by generations of the most practical people on the globe. Of late, attempts are being made to introduce the metallic mercury in pill form in Germany, but the number of observations is not sufficient to allow any conclusions to be drawn (8, 14).

No matter what the mercurial preparation is, so long as it is administered by the mouth, it gives rise to serious, undesirable effects, impairing the normal functions of organs, the activity of which is necessary not only to enable the living system to increase its defensive powers by taking in and assimilating the required amount and proper kind of food, but to prevent the production of gastric toxins which may give rise to cerebral symptoms, often erroneously ascribed to the syphilitic poison (15, 16).

But the most deadly blow was given to this method by proving its inefficacy against the syphilitic poison. Mercury, when given *per os*, is absorbed by the venous system of the portal vein and deposited in the liver, to be discharged again into the intestinal channel; thus only a very small amount is carried by the general circulation to other organs—for instance, the skin. Consequently, in a great many forms, even of early manifestations of syphilis, another, a more effective method, the hypodermic or endermic, is to be resorted to.

This recognized fact is inducing not only those who from force of habit are still using this mode of administration, but also those who brought this method into prominence, to seek some other manner of administration of mercury.

No wonder, then, that in the discussions which have lately taken place in the French Academy of Medicine many members have declared themselves in favor of a departure from the ancient methods; and observations upon observations are being published which tend to show the greater efficacy of the hypodermic method (17).

In this country the prevalent practice is still mostly limited to the *per os* method, largely due to the strong stand taken by an eminent syphilographer on behalf of this method (18).

When a clinician of such eminence as this syphilographer indorses a method of treatment, not only on account of the good results obtained by it, but, what is more important, claims for the method a "scientific

justification" (19), it is our duty before rejecting it to look into the accuracy of its scientific basis.

This advocate of the method *per os* asserts that mercury can better exercise its specific power over the virus if "so administered as to be a tonic"—i. e., in small, continuous doses—and from time to time being rushed to the "specific dose" (20). The tonic effect of such small, continuous doses he claims to have proved by the fact that the number of red blood-corpuscles was increased during the administration of such doses (21). Whether such a conclusion is correct depends upon the answer to the question: Is the increased number of red blood-corpuscles noticed in a drop of blood after the administration of a small "tonic" dose of mercury due to a genuine increase of the number of red corpuscles, or to a change in the concentration density of the organized elements of the blood, produced by the withdrawing of a certain amount of water from the general circulation? (22).

That withdrawing a certain amount of water from the general circulation is followed by an apparent increase of red blood-corpuscles in a given drop of blood is demonstrated in some normal and pathological conditions of life associated with loss of water from the system.

Thus, after physical exercise, a hot bath, in diarrhoea and cholera, the number of red blood-corpuscles is apparently increased. Furthermore, it is well known from clinical observations that small "tonic" doses of mercury produce an increase of all excretions, and consequently the blood may be more concentrated, showing a quasi increase of red blood-corpuscles. All this goes to show how careful we must be in drawing conclusions from a supposed increased number of red blood-corpuscles, even if the augmentation of the number of red blood-corpuscles is concomitant with a gain of weight of the body (23), as the latter is most probably due to the surroundings and mode of life of the patient. Not the quantity but the quality of the blood—the amount of hæmoglobin it contains—is the standard by which we have to measure the tonic effect of mercury upon the system, as was done by Justus, and he found that inunctions produce a larger increase in hæmoglobin than any other method of administration of mercury (24).

Deprived of its scientific basis, the method *per os* loses the strongest and the most needed justification for its recommendation, and this brings us to the consideration of the next method—hypodermic injections. The chief claim for this method is that it accomplishes *multum in parvo*—with small doses we can obtain great results; here the soluble and insoluble salts of mercury and pure metallic mercury are in use.

The effect upon the syphilitic manifestations and syphilitic diathesis is in accordance with the amount of metallic mercury extracted by the organism from the preparation, which usually depends upon the time the

preparation remains in the system and the quickness of its absorption; but with the prolonged sojourn and retarded elimination—with the increased amount of metallic mercury in the system—the dangers are increased. The least dangers are connected with injection of sublimate, as it is quickly eliminated by the system before the amount of metallic mercury of the preparation can be extracted, although cases are reported where death followed its administration (25).

The dangers which are connected with the administration of the insoluble salts and metallic mercury can be divided into three categories. Those of the first class can be easily avoided, as they depend mostly, if not entirely, upon the actions of the physician, who, by strictly observing the requirements of asepsis, will avert the occurrence of purulent abscesses, and by selecting the appropriate place for the insertion of the needle he can avoid the infliction of pain on the patient.

The second class of dangers is due to our incapacity to regulate absorption and to control elimination of the mercury when once it is in the system. We can hasten the elimination by various procedures, but we are powerless to stop it when it has once begun, so long as there is mercury in the circulation. By injecting an insoluble salt or metallic mercury a quantity is amassed from which the absorptive power can draw when an opportunity presents itself, and, circulating to an extent that is injurious to the tissues, it will produce severe forms of intoxication by destroying tissue elements, and is not rarely followed by death (26).

Although the victim may be sometimes saved by cutting out the mercurial depot, this procedure is not always sufficient to save life, because enough mercury may have already circulated in the system to irreparably injure it (27).

The last category is the most important, as the physician is entirely helpless when lung embolism is produced by injecting some of the mercurial mixture into a vessel (28).

The motto, then, *multum in parvo*, can be translated, "The less the patient takes of it the better."

These disadvantages should be sufficient to condemn the method as an everyday procedure, and to limit its use to very urgent cases, where a quick and strong action is desired, owing to the importance of the organ involved in the syphilitic process, as the eye and brain.

Of all the methods, not one fulfills the medical maxim, "*cito, tuto et jucunde*." If one is rapid in effect, the other is slow and uncertain, while the third, even if prompt in action, is by no means *tuto et jucunde*. Only one method meets all the demands that is, inunction—and it can be applied in every form and at every age.

In a method alleged as practical, *jucunde* plays an important rôle. The greatest objections are the uncleanness and the exposing of the patient's malady.

On account of the latter objection some other method may be employed, but only as a last resort.

Uncleanliness is a relative term, and varies with the habits of the patient and with the care the physician exercises in explaining the value of inunctions. It is claimed that in this country people will not permit themselves to be treated by this method, as it is, in the language of Keyes, "a dirty method at its best, and it is hard to get clean people to follow it conscientiously for any prolonged period" (29). But the assurance of Taylor, who says that in his experience "it is much easier to obtain the consent of patients in the upper walks of life to submit to and follow up the inunction cure than it is to deal with patients in a lower sphere of life" (30), and the statement of Dr. T. W. White, that an explanation of its advantages will suffice to insure its acceptance by an intelligent patient (31), convince us that the physician will not find it difficult to induce a patient to allow inunctions to be given him, especially when he can render the method less harsh by alternating it with the following *modus operandi*:

A piece of muslin or linen is made into a bag—like an ordinary pillow case—fifty centimetres long and forty centimetres wide. Its inner surface is smeared over with four to five grammes of the ointment and the bag is fastened to the shoulders, or wherever convenient, by means of straps. The ointment is thus next the skin, and vaporization occurs from the body temperature; and, as mercury is absorbed mostly by the lungs and only partly by the skin, the system is mercurialized rapidly and thoroughly (32, 33).

While other methods act quicker than inunctions, the effect is not lasting, and in syphilis *cito* is to be accepted as synonymous with *festina lente*—slow but sure. The effectiveness of inunctions is now recognized by many of its former opponents and induces them to acknowledge that they could not obtain the same results by any other method (34). Now, this is a very strong recommendation, considering that it comes from one of the most eminent advocates of the method *per os*, although it is only meant by its opponents to be applied to exceptional cases and not to treatment of the earlier forms of syphilis. But when we consider that all syphilographers, no matter what method or preparations they employ, advise a thorough and efficient treatment, especially in the early stage of syphilis, is it not advisable to use this method, the acknowledged most efficient one, also in early manifestations of syphilis? Furthermore, the method is the safest of all methods, although the occurrence of some forms of intoxication can not be denied. I am persuaded, however, that the force and effect of each of them have been greatly exaggerated, and that they can all be remedied and possibly avoided, not by any material alteration in the method itself, but by exercise of proper watchfulness.

In producing intoxication it is the amount intro-

duced into the system, and not the preparation of mercury administered, which is of prime importance.

The inunction method is open to the objection that the amount of mercury artificially introduced can not be definitely measured or determined; but we are always able to cut off the supply at the slightest sign of danger, and we do it in the pleasantest way for the patient, by means of soap and water and transportation to a fresh, clean, airy room.

The occurrence or absence of symptoms of intoxication—diarrhoea, salivation, tremor, or exanthemata—depends in nearly every case (idiosyncrasies excepted) upon what the physician does before, during, and after a series of inunctions. And we are thus led to consider how to proceed.

Before putting the patient under the influence of mercury we must examine his excretory organs, in order to ascertain whether they are able to eliminate the absorbed mercury without injury to their normal functions. The condition of the mouth, teeth, the absence of albumin and of sugar in the urine, the presence or absence of stone must be considered, and, if all is found satisfactory, we may proceed to the choice of ointments. This is a point of no small importance. By seeing that the blue ointment is free from rancid, irritable ingredients, as rancid fat and turpentine oil, we shall nearly always avoid skin symptoms due to external irritations. The metallic mercury in the ointment must be reduced to extremely fine particles in order to facilitate its entrance into the circulation. Lanolin, resorcin, and vasogen mercurial ointments have no special advantages as to absorption and action as compared with the blue ointment of the *United States Pharmacopœia*, provided the last is so prepared as to answer the requirements I have named.

The effect produced by the ointment upon the symptoms, their partial or complete disappearance, may in some cases guide our action during the application of the ointment, but when the eruption has disappeared it is always safer, before putting the patient under the influence of more mercury, to take pains to see that the power of elimination of mercury possessed by the kidney is not lessened by the presence of albuminuria or cylindruria. Then we shall discover the first evidence of intoxication before serious harm results to the patient in the form of diarrhoea, salivation, or a toxic eruption. It is hardly necessary to describe before this audience how to make inunctions. I shall only call attention to the principle underlying the effectiveness of inunctions. As the benefit derived from inunctions is mostly due to inhalation of mercury by the lungs, and only partly to skin inhalation (32, 35, 36, 37), all our endeavors during the course of the rubbings should be directed to selecting such a time and place, and adopting such a manner of application as will insure to the patient the best possible chance to inhale the mercurial vapors. Consequently, evening, especially the time be-

fore retiring, and a room kept at an even temperature, will best answer this purpose. It makes no difference how we rub in the ointment, so long as we take in as large an extent of skin as possible, so as to insure a larger surface for vaporization (38).

It is advisable to measure out the quantity of ointment required for each inunction.

I can not refrain from quoting the very practical and simple suggestion of Keyes regarding the manner in which this dosage of mercury is best accomplished. Keyes instructs the druggist to put into a separate box or bottle the quantity prescribed as proper for a simple inunction as a gauge for the patient to go by. The patient is instructed to take from his large box or bottle a portion about as great as that specially measured out for him, keeping the test dose to measure the others by. Inunctions thus administered will seldom give rise to any serious inconveniences; at least they will always be manageable.

Neither sex nor age nor form presents any contraindications for their use. On the contrary, they are one of the best methods in treating syphilitic infants, as integrity of the functions of the digestive organs is of paramount importance in infantile life, and is especially desirable when a strong, effective treatment is required. Other methods may be used as adjuvants, and in those cases when inunctions are contraindicated, as in people with a hairy skin, or those suffering from diseases of the skin in which its surface is affected. Here the bag application can be advantageously made, in combination with metallic mercury *per os*, or with soluble injections.

(To be concluded.)

THE TREATMENT OF GALLSTONES.*

BY WALTER LESTER CARR, M. D.

THE treatment of gallstones should be the management of the patient during the intervals of biliary colic, as well as the alleviation of symptoms at the time of the passage of the biliary calculi.

It is generally recognized that almost all patients who suffer from the formation of biliary calculi have either a predisposition to gouty or rheumatic disorders or a catarrhal disturbance of the intestine, induced by overindulgence in sweets, rich diets, and by sedentary habits. We find the majority of the patients are women, more often stout than thin, and, while thin people, men as well as women, have biliary concretions, the greater number of patients who come under treatment have considerable superficial adipose tissue, showing either an excess of or an imperfect oxidation of the food. The catarrhal condition of the intestines extends to the gall ducts and bladder, and the bacteria, most commonly the

* Read before the Society of the Alumni of the City (Charity) Hospital, March 8, 1899.

Bacterium coli commune, cause a deposit of cholesterol crystals.

As our first experience in the treatment of a patient with biliary calculus is generally during an agonizing paroxysm of colic, it may be well to speak of the acute condition and the best method of alleviating the pain.

A paroxysm of biliary colic is most severe from one to three hours after eating, while the food is passing from the stomach into the duodenum and the bile is flowing from the gall bladder.

To stop the pain is the first indication, and a hypodermic injection of morphine, one fourth of a grain, with atropine, one one hundred and fiftieth of a grain, repeated as needed, will quiet the patient better than any other means. Inhalations of chloroform will, in paroxysms of intense pain, be of special service. If the morphine be used first, chloroform may be administered for primary anæsthesia until the former drug has time to act. Hot applications are to be made over the abdomen, and the water bottle is to be kept at the feet to stimulate the circulation in the extremities. Hot baths are not always easy to give, but they do good to some patients.

Belladonna is thought to lessen the spasm of the cystic duct, but its administration by the mouth or by means of external applications will not be so satisfactory as the combination of atropine with the morphine subcutaneously. The same may be said of the use of the opium for a paroxysm. If the stomach is irritable and there is vomiting, it is best to reserve the opium for some other time. Occasionally opium may be given in a suppository or in an enema, but in severe cases the pain is so intense that it does not admit of this method when relief can be afforded by the morphine. In addition to heat to the abdomen and extremities, considerable relief may be experienced by draughts of hot water to which bicarbonate of sodium is added. Even if rejected, the hot water will clear out the stomach without depressing the circulation; and if retained, it has a salutary influence. Emetics and cathartics are contraindicated and should not be given during a paroxysm. If the abdomen is distended and the bowels are sluggish, a flushing of the large intestine will be a satisfactory means of relieving distention.

After the intense pain is over, if the bowels are constipated, a dose of calomel may be administered and followed in a few hours by the sulphate or phosphate of sodium.

A patient who is known to have gallstones, either the large concretion that fill the gall bladder or the "sandy bile" that irritates the ducts, should have judicious medical treatment and advice to enable him to overcome the conditions associated with the formation of biliary concretions.

The diet is to be restricted to eliminate fats, sauces, gravies, fried articles, pastry, and all rich foods that are likely to cause colicky attacks. Meats, fish, green vegetables, fruits, and bread are to be allowed, if there is no

contraindication. The condition of the patient must be recognized, as a stout woman who does not exercise will need less fat food than a phthisical man. At first it is best to cut off all fats and sugars, but so soon as the bile action is under control, sweet oil and butter may be allowed. Water is necessary from the first, not only to increase the fluidity of the bile, but also because water stimulates the blood-vessels of the intestinal and portal circulation. Vichy water has a good effect when taken early in the morning, a glassful from half an hour to an hour before breakfast, and an hour before luncheon and dinner. When Vichy is taken at the spring, there is a definite action from it; but for everyday purposes, the bicarbonate of sodium dissolved in water before meals, supplemented by doses of phosphate of sodium for laxative effect, will make a serviceable substitute in the treatment of people who can not go to spas or afford expensive mineral waters. Carlsbad salts and water are regarded highly by many practitioners, and justly so, as they have enough action on the intestines, gall bladder, and ducts to expel stones that have been retained for a long period. With the administration of any alkaline or saline, the first treatment should last for a month or six weeks, but after that time it is fallacious to continue the use of alkalines and salines except in an intermittent way, or to meet particular indications.

It must not be understood from the foregoing statement that Carlsbad and other salts are not serviceable, for the contrary is true; but it is irrational to depend upon these salts to expel all stones. The treatment is often carried on at the expense of the general nutrition without causing the passage of calculi, though intestinal peristalsis will be increased.

The drugs that are used with the idea that they dissolve the biliary calculi are chloroform, ether, and turpentine. For a great many years ether and turpentine have had a place in the treatment of calculi, because of the supposition that they either dissolve or saponify the gallstones. They are administered in doses of two or three drachms. There is no doubt but that the oil of turpentine is a good stimulant to the intestine, and that it possesses bacteriological value, but it is questionable how much of the saponification of the bile is due to its combination with solid cholesterol masses. It is much more likely to stimulate the flow of the fluid bile than to break down old masses of cholesterol.

Ether has an action on bile, but it is doubtful if the gallstones are dissolved. Both ether and turpentine stimulate biliary flow, and in this way they assist small calculi through the cystic and common ducts to the intestine. Ether and chloroform relieve spasm, and the good effects observed when they are administered should be in part ascribed to the relief of pain. Ether is a recognized stimulant to the circulation and it acts quickly, so that the sense of well being is not always a positive guide that the gall bladder is discharging its con-

tents, though masses of bile may be seen in the stools. On careful examination, these will frequently be found to be saponified bile and not calculi of cholesterol crystals.

Sweet oil is lauded by physicians as a valuable agent in the treatment of gallstones. It does do good in some cases, but an inspection of the bile that is passed in the stools will show that many of the "calculi" are oil globules surrounded and intermingled with bile. Sweet oil is, however, a suitable agent for increasing peristalsis, and it will aid in the expulsion of stones even if it does not dissolve them.

Salicylate of sodium stimulates the flow of bile, and the drug is easy to administer and safely borne for a long period. Salol, salophene, and naphthalene are useful when intestinal antiseptics is required; but when the bile is dammed back by a complete occlusion, the administration of pills of bile coated with salol, two hours before meals, will prevent putrefactive changes in the intestine.

The cholate of sodium is also given for the same purpose.

The succinate of sodium in doses of five grains three times a day is a serviceable drug, and many patients are relieved by its use.

The succinate of iron peroxide is administered as a tonic and with an idea that the escape of oxygen will chemically alter the gallstones.

Massage of the abdomen with gentle manipulation in the region of the gall bladder will empty it of the small stones, but great care is needed that there shall be no impaction of large calculi.

Exercise to strengthen the abdominal muscles and increase the action of the diaphragm, fresh air, and regulation of diet will benefit all patients who are sufferers from calculi.

Surgical procedure is the only relief in an impaction, or in cases in which the gall bladder is distended with a number of calculi that are not acted upon by the treatment above indicated.

It is a medical matter to keep the patient with gallstones on a suitable diet with proper hygiene and medication; but the necessity for surgical interference should be considered when the symptoms are those of impaction, or when there are constantly recurring attacks of colic with the dangers of suppuration and perforation.

68 WEST FIFTY-FIRST STREET.

THE SURGICAL TREATMENT OF GALLSTONES (BILIARY CALCULI).*

By CARTER S. COLE, M. D.

IN accepting the responsibility for the surgical treatment of biliary calculus in the discussion arranged for this evening, I had not realized how much there was to be said about everything touching this whole subject, except the surgical side. I may be permitted to offer some suggestions quite opposed to surgical interference, and then give the conditions which justify operation, together with the variations of such procedures.

The clinical history and pathology have already been given at length, to say nothing of the medical means for relief, but from the surgeon's standpoint it may not be amiss to remind you that there are many contradictory facts connected with cases of biliary calculus. For example, in a case in which many calculi are present there may be no symptoms worthy of note for a long time, and when the condition is recognized simple medical methods may entirely relieve the patient; and in another case a single stone of small size may be the cause of an intestinal obstruction. Again, a small stone may completely block the common duct and give rise to aggravated symptoms of the trouble; a large stone may be passed by the bowel (after having ulcerated through in most cases) and be the first clue to the disease from which the patient has been suffering for a long time. In still another class of cases one or more stones may have already caused a single abscess or multiple abscesses of the liver before the condition has been suspected.

The site of the stone unquestionably influences materially the train of symptoms as well as the pathological sequelae. In the gall bladder one or more calculi may for a long time remain and do no harm. In the common duct or in the cystic duct a single small stone may conduce to a fatal termination of the case. We are usually first advised of the presence of a stone by its effort to enter the cystic or the common duct, although the colic may have occurred from the simple existence of the smaller stones before they entered either of the ducts or the gall bladder. The possibilities of distention of the ductus choledochus are unquestionably great, and yet it is more than likely that the large stones believed to have escaped through a distended duct have in reality done so by ulceration. So much, then, for the possibilities and some of the variations of the disease apart from surgical intervention. And granting that medical measures have failed (I need not remind you of cholate of sodium* as a preventive and curative agent; of olive oil, especially in

Food and Alcohol as Causes of Disease Respectively.
—The *Sanitary Home* for April quotes Sir Henry Thompson as saying: "I have come to the conclusion that more than half of the disease which embitters the middle and latter part of life is due to avoidable errors of diet; and that more mischief, in the form of actual disease, of impaired vigor, and of shortened life, accrues to civilized man from erroneous habits of eating than from the habitual use of alcoholic drink, considerable as I know that evil to be."

* Read before the Society of the Alumni of the City (Charity) Hospital, March 8, 1899.

† Danby. *American Journal of the Medical Sciences*, Philadelphia, 1876, vol. lxxi, pp. 410-413.

large doses, the knowledge of which has been recorded for many years and in many places, as well as in many lands; * of Sprudel salts,† and of the more uncertain and unsatisfactory succinate of iron,‡ and mercurial treatment,* going back to a previous century)—granting, I repeat, that these and other medical measures have failed to relieve frequent attacks of great severity, with or without jaundice, but attended by signs of a possible or probable suppurative inflammatory process, we are confronted by conditions demanding surgical intervention. The technical terms as collected in the text-book of Wharton and Curtis|| need only to be explained to cover the field of operative procedures:

1. Cholecystotomy, or simple incision, with subsequent treatment by drainage.

2. Cholecystostomy, in which the gall bladder is stitched in the wound after incision.

3. Cholecystodysis, in which the gall bladder is incised, the stones are removed, and the bladder is sutured and returned to the abdominal cavity without drainage ("ideal cholecystotomy").

4. Cholecystectomy, in which the gall bladder is excised.

5. Cholecystenterostomy, in which a connection is made between the gall bladder and intestine in order to provide for the entrance of bile into the gut.

6. Choledochotomy, or choledochendysis, incising or incising and suturing the common bile duct.

Practically, a simple incision is made over the tumor. If the gallstone is in the common duct and can be pushed into the gall bladder, or crushed *in situ* (as is often the case), and then pushed into the gall bladder; or, if it is already in the intestine and causes an obstruction; if it can be crushed by the fingers or rubber-guarded forceps without injuring the gut; or, if an incision must be made upon it, the parts are repaired, if possible, completely at the time. If suppuration is present, drainage by gauze, preferably, or by tube is used. The line of incision is of small import and varies with the individual case as well as with the tastes of the surgeon. An incision that does the least violence to the natural anatomical relations of the parts is preferable.

In suppurative cases the parts are usually already bound to the parietal peritoneum; if not, it is well to guard the abdominal cavity against contamination by stitching the tumor to the abdominal walls before opening. I have seen no special harm follow the introduction of clear bile into the peritoneal cavity. The

complete removal of the gall bladder is seldom desirable, but seems not to be followed by especially bad results. Let me remind you of the great value of pure carbolic acid applied by a swab to the cavity in which suppuration has occurred (here as elsewhere in surgery), as well as of the fact that we have its action under complete control by the use of alcohol, as discovered and detailed at a recent meeting of the New York County Medical Society by Dr. S. D. Powell. In cases where even a considerable amount of bile is discharged by the external opening, it has not been my experience to see much if any harm result; and sooner or later every patient has recovered without a biliary fistula. Again, it has seemed to me that the pure carbolic acid has contributed in no small manner to the result.

In conclusion, I may remind you that the care as well as the capacity of the surgeon are prime factors in the operation to be attempted; that in many cases a simple incision with drainage is entirely and eminently satisfactory; and that in all cases in which suppuration has already occurred, especial care must be taken to guard the abdominal cavity against infection. The means to this end must be decided at the time by the conditions with which we have to contend; although, personally, I feel great assurance in the power of pure carbolic acid to prevent the extension of the suppurative process as well as to relieve suppuration already present.

Therapeutical Notes.

The Treatment of the Bronchopneumonia of Measles.—A writer in the *Presse médicale* for February 25th (*Lyon médical*, March 19th) says that enveloping the chest with napkins soaked in cold water and partly wrung out is the most efficient remedy. As a stimulant, one may use Marfan's mixture, the formula of which is as follows:

R Sodium benzoate	7½ grains;
Ammonium acetate	21½ "
Old cognac	120 to 240 "
Gummy julep, each	675 "
Syrup of Tolu,	

M. S.: A dessertspoonful every hour or two, according to the child's age.

Creosote and Ichthyol in the Treatment of Pulmonary Tuberculous Disease.—Dr Hugo Goldman (*Wiener klinische Wochenschrift*, 1898, No. 35; *Meinisch-chirurgisches Central-Blatt*, March 17, 1899) gives the following formula, by which, he says, the taste of ichthyol is masked:

R Creosote carbonate, each	15 parts;
Ichthyol,	
Glycerin	30 "
Peppermint water	10 "

M. S.: Twenty drops, gradually increased to thirty (for children, ten to twenty), three times a day, in wine or lemonade, after meals.

* Gay. *Buffalo Medical and Surgical Journal*, 1866 '67, vol. vi, pp. 214-217. — Hatch. *Chicago Medical Journal*, 1867, vol. xii, pp. 469-471. — Kennedy. *Lancet*, 1880, vol. ii, p. 456.

† Goldsmith. *Boston Medical and Surgical Journal*, 1878, vol. xxviii, pp. 133-136.

‡ Buckner. *Boston Medical and Surgical Journal*, 1879, vol. c, pp. 583-584.

* Gibbons. *Ann. Med.*, Edinburgh, 1796, vol. i, pp. 279-305.

|| *The Practice of Surgery*, p. 935 and following.

Elixir of Terpene for Bronchitis.—The *Revue médicale* for March 29th, quoting the *Gazette hebdomadaire de médecine et de chirurgie*, attributes the following to Crinon:

℞ Terpene	150 grains;
Glycerin	2,250 "
Alcohol	2,250 "
Syrup of honey	1,875 "
Tincture of vanilla	150 "

M. From two to four tablespoonfuls daily.

An Ointment for Acute Articular Rheumatism.—The *Settimana medica* for March 25th ascribes this formula to Bourget:

℞ Salicylic acid,	} each	10 parts;
Lanolin,		
Oil of turpentine,		
Lard		80 "

M.

Atropine as a Remedy for Seasickness.—The *Journal de médecine de Paris* for March 26th credits this formula to F. Rebate:

℞ Atropine sulphate	0.045 of a grain;
Distilled water	2½ drachms.

M. A hypodermic syringe-ful to be given every seven or eight hours. Rebate has seen no accidents from its use. In a number of cases he has been able not only to stop the vomiting, but also to allay the disagreeable sensation in the epigastrium.

A Revulsive and Stimulating Embrocation.—The *Progrès médical* for March 25th ascribes the following formula to Huchard:

℞ Tincture of juniper	240 parts;	
Tincture of lavender	120 “	
Oil of turpentine	60 “	
Menthol, {	} each	1 part.
Thymol, {		

M.

Antilactactic Pilules.—The *Gazette hebdomadaire de médecine et de chirurgie* for March 30th gives the following:

℞ Sodium nitrate	150 grains;
Camphor,	} of each.... 60 "
Potassium nitrate,	
Rob of sambucus,	

M.

To make sixty pilules. One to be taken morning and evening. [A rob is "a preparation made from the juice of fruit by evaporating to the consistence of a soft extract, generally with the addition of sugar."—*Foster's Encyclopædic Medical Dictionary*, vol. iv, p. 2721, *sub verbo*.]

Treatment of Syphilitic Alopecia.—Dr. Gaucher (*Journal des praticiens*, April 1st) makes frequent applications to the scalp of the following lotion:

℞ Corrosive sublimate	3 grains;
Chloral hydrate	60 "
Resorcin	30 "
Castor oil	15 "
Alcohol	3,000 "

M.

From three hundred and seventy-five to seven hundred and fifty grains of tincture of cinchona may be used to replace the same amount of alcohol. But the daily application of quinine is apt to temporarily redden the hair.

An Enema for Membranous Enterocolitis.—A formula of Revillon's is thus given in the *Progrès médical* for March 25th:

℞ Quince-seed mucilage	7,500 grains;
Bismuth subnitrate, {	} each ... 150 "
Bismuth salicylate, {	

M. To be administered after the expulsion of an ordinary enema, and retained as long as possible.

For Scabies.—The *Cronica medica* for February 15th says that one or two frictions with the following ointment often suffice to effect a cure:

℞ Naphthaline	1 part;
Lanolin	9 parts.

M.

Methylene Blue in Malaria.—The *Indépendance médicale* for April 5th attributes to Parenski the following:

℞ Methylene blue	15 grains;
Distilled water	150 "

M.

One cubic centimetre (sixteen minims) may be injected daily.

The Treatment of Superficial Burns.—According to the *Gazzetta degli ospedali e delle cliniche* for March 23d, Reclus extols the following ointment:

℞ Iodoform	from 7½ to 15 grains;
Antipyrine, }	} of each 75 "
Boric acid, }	
Vaseline	600 "

M.

Wertheimer applies to burns, especially in children, the following liniment:

℞ Thymol	from 1½ to 2 grains;
Lime-water, {	} of each 1,500 "
Linseed oil, {	

M.

Starr, to allay the pain and prevent the formation of bullæ, applies instantly to a superficial burn the following ointment:

℞ Perchloride of iron	90 grains;
Vaseline	360 "

M.

Haas uses an ointment made by dissolving from a hundred and fifty to three hundred grains of aristol in six hundred grains of lanolin and the same quantity of vaseline.

Landolt and Gyax employ the following formulæ: For burns of the first degree:

℞ Cocaine hydrochloride	22½ grains;	
Vaseline, {	} of each	150 "
Distilled water, {		
Lanolin	45 "	

M.

For those of the second degree:

℞ Cocaine hydrochloride	22½ grains;
Salol	75 "
Vaseline	375 "

M.

And for those of the third degree:

℞ Euphrene	22½ grains;
Olive oil	52½ "
Lanolin	225 "
Vaseline	450 "

M.

This ointment is said to be specially serviceable in burns of the eyelids.

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BORAX AND BORIC ACID AS PRESERVATIVES OF
FOOD.

THE *National Druggist* has undertaken a searching inquiry into the experience of various authorities in the matter of the alleged harmfulness of these agents, and into the published opinions of writers. The results of its investigation are given in its April issue. Our contemporary has been able to find only one printed article purporting to be in any way authoritative in which the preservatives in question are said, and that by false analogy, to be perhaps injurious to the animal organism. The false analogy in the article, by Peligot, originally published in a secular journal and probably written under the bias of an inclination to help on the trade in refrigerated meats at the expense of the preserved-meat industry, lies in his having inferred from the deleterious action of borax and boric acid on vegetation that they were injurious to animal life, the direct opposite, as our contemporary points out, of the inference he might legitimately have drawn.

This article of Peligot's, perverted by garbled extracts and by ignoring the fact that the experiments had been performed only on plants, served another writer, Le Bon, whose article also was originally published in a French secular journal, and thence translated for the *Chemical News* for January 3, 1879, as the foundation for such sweeping assertions as that all saline preservatives, including common salt, should be avoided, and that refrigeration was the only safe method of preserving meats, etc., to be used as food. One has simply to bear in mind, says the *National Druggist*, that twenty years ago, when Le Bon's article came out, there was a contest going on between persons engaged in handling refrigerated meats from South America and Australia and those engaged in the older processes of preservation.

Our contemporary states that it has been able to find but one report in medical literature of evil consequences ascribed to borax or boric acid, that of Dr. Gower, in the *Lancet* for September 24, 1881, who states that in three cases in which large doses of borax had been given for prolonged periods in the treatment of epilepsy its use had been followed by psoriasis. Granted, says the

Druggist, that the psoriasis was caused by the borax, does not the exclusive use of meats put up with common salt give rise to a much worse disease, scurvy? And, yet, it adds, the use of salt as a food preservative is not forbidden.

On the other hand, the *Druggist* cites many and eminent authorities in testimony to the innocuousness of borax and boric acid as preservatives. In short, our contemporary seems to us to have "blown away," as it phrases it, the last possible objection to the use of these agents for preserving articles of food.

THE FOOD QUESTION IN THE TROPICS.

Now that we have become a power having national interests in the tropics, it may not be amiss to call attention to the fact that much physical harm is done to white residents of tropical regions by their habits of eating overmuch meat and other highly nitrogenous food, and of using alcohol with the same freedom as that to which they are accustomed in their own temperate climates. We can assert from actual experience in many tropical countries, and this is not altogether in accordance with what would naturally be expected, that as soon as the white man becomes settled down after his arrival in tropical regions, the edge of his appetite, instead of being blunted by the heat, is actually sharpened, and he eats a larger quantity of food at breakfast, "tiffin," and dinner than he does at home. The Oriental also eats a large quantity in *bulk*, but in his normal state it is largely vegetable food with a smaller percentage of nitrogen than is contained in the condensed flesh foods used by dwellers in temperate climates. When the native becomes semi-Europeanized, however, he begins to imitate to some extent the white man's usages and to accustom himself to dinners on the European plan, though he frequently keeps a portion of his house organized in native fashion and therein takes some of his meals after native methods.

The *Journal of Tropical Medicine* for March points out very justly the great tendency to diabetes observed among the semi-Europeanized Chinamen in the British possessions in the Orient, and connects it with their adoption of "English chow." As the native is naturally a vegetable feeder, his appetite demands a great bulk of food, and when he adopts the more concentrated foods which he sees in use among those inhabitants of temperate climates who carry their national customs and habits with them, it is a fact that while a comparatively small amount may be all that is requisite for nutrition, it does not suffice to stay the instant demands

of his appetite. The work thrown on the excretory organs, and especially on the liver and kidneys, by this excessive ingestion of nitrogenous material is thus very heavy; and it is small wonder that diseases of the intestinal canal and liver, and also glycosuria, are found to be very prevalent under such circumstances. We have already stated that the white man also will probably find his appetite for bulk of food, as distinguished from the systemic cry for nutriment, increasing; and we venture to sound a warning note that unless he wishes to become the irascible, dyspeptic, liver-troubled person that so many Anglo-Indians are, or a diabetic, as are so many of the semi-Europeanized Chinese, he should limit himself in the more highly nitrogenous foods, and in the use of alcohol, and "fill up" to the demands of his appetite for a "square meal" with rice and other vegetables and fruits.

In making these suggestions for the benefit of individuals likely to be induced to reside in the Orient or the West Indies by the great promotion of intercourse and commerce which our new possessions will inevitably entail, we would add that if these are the dangers into which ignorance may lead the private individual, it behoves us especially to take thought for the soldier, who has not the privilege of selecting his own rations, but is dependent for his food upon what the army regulations allow and cause to be provided for him. The plea for elasticity in respect of the regulations regarding diet, so as to suit varying conditions of climate, etc., has been forcibly urged in an original communication by Dr. Louis L. Seaman, which appeared in the issues of this *Journal* for March 18th and 25th, and we content ourselves in this connection with directing attention thereto.

ILLUMINATING GAS AND EXPLOSIONS.

The president of the American Chemical Society, Professor Charles E. Munroe, made Explosions Caused by Commonly Occurring Substances the title of his address before the recent New York meeting of the society. It is printed in full in the April number of the *Journal of the American Chemical Society*. To a considerable extent it deals with explosions proceeding from the presence of substances not ordinarily treated as explosive. The whole address is well worthy of careful study, although it does not purport to contain anything new. We have not space to consider more than that portion of it which relates to explosions of mixtures of illuminating gas with air.

Illuminating gas such as is supplied to towns is not in itself explosive, as Professor Munroe remarks, and

can not even be ignited save in the presence of a supporter of combustion, such as atmospheric air. These facts were strikingly exemplified during the siege of Paris. The governor of the city, says Professor Munroe, was apprehensive that the gas-holders of La Villette would endanger the fortifications, but he was assured that there was not the slightest risk. A shell pierced the holder at Ivry and lighted the gas. There was a huge jet of flame for eight minutes, the holder sank slowly, and all was over. A shell penetrated a holder at La Villette and burst in the interior, but did not ignite the gas. Another shell entered a holder at Vaugirard, but no ignition followed the occurrence.

As regards the explosion in the Capitol at Washington some months ago, it seems that the gas had been under twice the normal pressure for half an hour before the accident took place, so that it passed through the governor and, being of the specific gravity of 0.601, gradually settled, mixed with air, until it reached the level of some burning jets and exploded.

A HINT TO CORRESPONDENTS.

It not infrequently happens that we receive letters, the nature of which suggests that they are intended for publication, but which we are obliged to ignore because the writers, either from ignorance of, or carelessness as to, editorial requirements, do not conform thereto; and consequently the publication of their letters would entail upon us an amount of additional labor which we do not feel disposed to undertake. As instances of such defects, we may mention the writing upon both sides of the page, which entails considerable additional trouble on either editor or printer; the habit of using abbreviations, which we distinctly object to as leading to ambiguity and the omission of small words, such as pronouns, etc., from sentences, thus rendering them incomplete. Brevity, it is true, is the soul of wit; but it should be exercised in the condensation of thought, and not in the omission of small words which are necessary to the grammatical construction of a sentence. These items have to be corrected in the editorial office, and much unnecessary labor is thereby thrown on the editor; and further, if the letter, as not infrequently happens, is closely written on a small sheet of note paper, it is often impossible to make such corrections legibly without rewriting the entire letter. We trust our readers will bear this in mind.

ACCIDENT ANNUNCIATORS IN PARIS.

THERE are certain persons who never tire of telling us how well oiled the municipal machinery is in Paris. Perhaps the following exception proves the rule: A working girl was run down in the street and seriously injured. She was carried into an apothecary's shop, where "first aid" was rendered, but, as there was no telephone connection with the proper ambulance station, a physician, who happened to be passing, had the kindness to obtain permission to use the private telephone of a commercial firm. After recounting the in-

cident, *Figaro* comments as follows: "We hope that the municipal council will complete its ambulance service as soon as possible by a system of annunciators." The *Gazette médicale de Paris* summarizes *Figaro's* account, and adds: "To judge from this note, one would think that we already had accident annunciators in Paris! They have been voted, it is true, but they will not be placed so long as Dr. A. J. Martin has charge of that service, which he detests above everything!!"

MANILA AND THE PLAGUE.

ACCORDING to reports, the almost annual outbreak of plague in China has already set in at Hongkong. The relations between Hongkong and Manila are very close and intimate, and it will be incumbent upon all concerned to take all necessary precautions, sanitary and otherwise, to prevent an outbreak of the disease among our troops there.

ALBUMINURIA AND LACTATION.

A MOTHER's inability to nurse her child is recognized as a great misfortune; so also is anything that renders it improper for her to do so. Hence it is exceedingly satisfactory to learn that at a recent meeting of the Paris Obstetrical Society (*Progrès médical*, April 1st) Dr. Budin and Dr. Chavanne reported the results of their extensive observations of women who, although they had had albuminuria with their pregnancy and in many instances puerperal eclampsia, nursed their children—satisfactory because it has been held that such women should not undertake lactation. Budin and Chavanne find that the children thrive and that the albuminuria promptly disappears.

"SEROTAXIS" IN DERMATOLOGICAL DIAGNOSIS.

SOLUTIONS of caustic potash, as all dermatologists know, are very effective in overcoming infiltration of the skin, such, for example, as is so prominent a feature in many cases of eczema of long standing. Dr. Adalbert Frickenhaus, of Hamburg (*Monatshfte für praktische Dermatologie*, February 1st; *Indipendence medicale*, April 5th), has formed the theory that potash applications cause a diffusion current of serum to set in toward the skin, and that this current carries with it pathogenic germs that may be lurking in the deeper structures of the integument. In a number of cases of lupus he has been able to detect tubercle bacilli in the serous discharge set up by such applications. He has not, however, found the test of any considerable diagnostic value in leprosy or in trichophytosis, although in the last-named disease potash applications are of great therapeutic use. The solution need not be strong, unless it is desired to remove the horny layer of the epidermis.

THE PLANTAR REFLEX BEFORE BIRTH

THERE may be some practical utility under certain circumstances in examining for the plantar reflex in an unborn child, as is remarked by Dr. Paul Tschier (*Frauenarzt*, February 20th; *Indipendence medicale*, April 5th), who reports a case of placenta previa in which, having pierced the placenta for the purpose of extracting the child through it, he met with such defective dilatation of the cervix uteri as compelled him

to resort to delivery by other means. To ascertain if the child was living, he tickled the sole of one of its feet, and the natural retraction of the foot promptly followed, but this promptness gradually lapsed into tardiness, which was attributed to increasing carbonization of the child's blood under the little delay that was necessary.

LYMPHATISM AND THE OCCURRENCE OF SUDDEN DEATH IN DIPHTHERIA.

Two or three years ago Escherich pointed out that there was a connection between lymphatism and the occurrence of sudden death in diphtheria. Recently one of his pupils, Dr. Moriz Daut (*Jahrbuch für Kinderheilkunde*, 1898; *Archives de médecine des enfants*, April, 1899), has reported some new observations tending to confirm the connection. In twenty-seven cases of diphtheria the larynx and trachea were invaded, but the false membrane was neither thick enough nor extensive enough to cause death by asphyxia. However, sudden death took place in spite of intubation, and was attributed to cardiac atony. The diagnosis of lymphatism rested on such constitutional stigmata as the patient's pasty look, some degree of rickets, moderate enlargement of the spleen, and hypertrophy of the follicles of the base of the tongue and of the pharynx, as well as of various lymphatic glands, sometimes also on dullness due to the thymus gland. The status lymphaticus, Daut thinks, tends not only to lead to sudden death in diphtheria, but also to favor the occurrence of the disease.

THE EXPRESSION TREATMENT OF MASTITIS.

WELL recognized as the value of methodical expression is in cases of mammary engorgement, it is perhaps seldom so sharply exemplified as in a case reported by M. Thévenot at a recent meeting of the Lyons Society of the Medical Sciences (*Lyon médical*, April 2d). On the eleventh day after confinement the temperature, which had thus far been normal, rose to over 103° F. It fell, but rose again on the fifteenth day, this time, nearly to 106°. The left breast was painful and presented nodules of tumidity that gave issue to pus mingled with milk. Methodical expression of the milk ducts was practised for from twenty to twenty-five minutes, and then a moist compressive dressing was applied. The next day expression yielded nothing but milk. A few days later there was a fresh rise of temperature, and the right breast was found swollen, but without lymphangitis. Expression was immediately resorted to, and there was no further pain or fever. Thus, says M. Thévenot, an abscess in each breast was prevented.

A DEVICE FOR INDICATING THE PROXIMAL END OF A RUPTURED PRETHRA.

ONE of the difficulties in an operation for complete rupture of the urethra is that of finding the proximal traumatic aperture. In the *British Medical Journal* for April 8th Dr. M. F. Simon, chief civil medical officer of the Straits Settlements, alludes to this difficulty and mentions a device to which he has resorted successfully in three cases, one, however, that is available only after cystostomy. Through the suprapubic opening a small catheter mounted on a slightly curved stylette is passed down the anterior wall of the bladder and guided into the vesical end of the urethra by means

of a finger in the rectum. The stilette being then withdrawn, the catheter is passed on until its point emerges in the wound in the perinaeum.

THE CITY BOARD OF HEALTH AND THE ANTITOXINE TRADE.

THERE are growing indications that, as we lately said was probable, the board is inclined to desist from selling its products. On Saturday of last week the president of the board listened to the arguments presented by a number of medical men who had been invited to meet him, and is reported to have said to them that he was convinced that the department ought to stop the manufacture of antitoxine, except for its own use or for emergencies.

THE CHICAGO BOARD OF HEALTH.

WE are glad to learn, from the *Journal of the American Medical Association* for April 15th that the mayor of Chicago indicated in his recent (second) inaugural address a proper appreciation of the excellent work that has been done by the board of health of that city, work to which we have often alluded in commendatory terms.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending April 15, 1899:

DISEASES.	Week ending Apr. 8.		Week ending Apr. 15.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	19	7	8	4
Scarlet fever.....	156	11	227	4
Cerebro-spinal meningitis.....	9	10	0	16
Measles.....	267	14	270	12
Diphtheria.....	185	29	199	39
Croup.....	12	9	15	2
Tuberculosis.....	159	166	202	173
Small-pox.....	2	0	29	0
Chicken-pox.....	21	0	30	0

The American Gastro-enterological Association.—The second annual meeting will be held in Washington, on Tuesday, May 2d, under the presidency of Dr. D. D. Stewart, of Philadelphia. In addition to the president's address, the programme contains the following titles: Further Remarks on Erosions of the Stomach, by Dr. Max Einhorn; Fate of the Digestive Ferments, by Dr. John C. Hemmeter, of Baltimore; An Experimental Study of the Absorption of Strychnine in the Different Sections of the Alimentary Canal of Dogs, by Dr. S. J. Meltzer, of New York; The Abuse of Intragastric Diagnostic and Therapeutic Procedures, by Dr. Morris Manges, of New York; A Case of Dilatation of the Stomach due to Latent Ulcer at the Pylorus. Operation by Halsted; Exhibition of the Patient, by Dr. Julius Friedenwald, of Baltimore; Experiments on Gastric Digestion, by Dr. Fenton B. Turck, of Chicago; The State of the Gastric Secretions in Organic Disease of the Heart, by Dr. Frank H. Murdoch, of Pittsburgh; Gastric Ulcer associated with Anæmia, by Dr. Lewis Brinton, of Philadelphia; Some Remarks on Pylorospasm, by Dr. J. Kaufmann; and A Simple Method in Administering Hydrochloric Acid, by Dr. Charles D. Aaron, of Detroit.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general for the week ending April 15, 1899:

Small-pox—United States.

Mobile, Ala.....	Apr. 1-6.....	3 cases.	
Washington, D. C.....	Apr. 3.....	5 "	
Key West, Fla.....	Mar. 29.....	1 case.	
Chicago, Ill.....	Apr. 7.....	1 "	
Evansville, Ind.....	Mar. 31.....	1 "	
		Total,	17 cases.
New Orleans, La.....	Mar. 26-Apr. 1.....	42 "	2 deaths.
Baltimore, Md.....	Apr. 1-8.....	1 case.	
Newbern, N. C.....	Apr. 6.....	1 "	
Galveston, Texas.....	Apr. 1.....	4 cases.	
Zapata County, Texas.....		Small-pox present.	
Newport News, Va.....	Apr. 2-8.....	13 cases.	
Norfolk, Va.....	Apr. 2-7.....	31 "	
Portsmouth, Va.....	Apr. 1-7.....	9 "	

Small-pox—Foreign.

Hongkong, China.....	Feb. 18-25.....	5 cases,	4 deaths.
London, England.....	Mar. 11-18.....	1 case.	
Athens, Greece.....	Mar. 18-25.....	31 cases,	23 "
Calcutta, India.....	Feb. 25-Mar. 4.....	1 death.	
Madras, India.....	Mar. 4-10.....	1 "	
Chihuahua, Mexico.....	Mar. 18-25.....	1 "	
Mexico, Mexico.....	Mar. 26-Apr. 2.....	2 "	2 deaths.
Moscow, Russia.....	Mar. 11-18.....	24 "	4 "
Odessa, Russia.....	Mar. 18-25.....	1 case.	
St. Petersburg, Russia.....	Mar. 18-25.....	13 cases,	1 death.
Warsaw, Russia.....	Mar. 11-18.....	3 deaths.	
Constantinople, Turkey.....	Mar. 6-13.....	7 "	

Cholera.

Calcutta, India.....	Feb. 25-Mar. 4.....	16 deaths.
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Plague.

Calcutta, India.....	Feb. 25-Mar. 4.....	23 deaths.
Mauritius.....	Feb. 14.....	1 case.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 15th inst., a discussion on cerebro-spinal fever was opened, during which the following papers were presented: The Bacteriology and Demonstration of the Diplococcus Intracerebellaris Meningitidis, by Dr. G. C. Crandall; The Symptoms of Cerebro-spinal Fever, by Dr. Given Campbell; The Diagnosis of Cerebro-spinal Fever, by Dr. Elsworth Smith, Jr.; The Disease in Children, by Dr. E. W. Saunders; The Treatment of Cerebro-spinal Fever, by Dr. H. S. Brookes; The Eye Complications, by Dr. J. Ellis Jennings; and The Ear Complications, by Dr. Max A. Goldstein.

The New York Academy of Medicine.—At a stated meeting, on Thursday evening, the 20th inst., the following papers were presented during the continuation of the discussion on malaria: The Morphology of the Malarial Organism, by Dr. James Ewing; Malarial Nephritis, by Dr. William S. Thayer, of Johns Hopkins University; and Some of the Less Common Effects of Malaria, with Remarks upon the Treatment of Chronic Infection, by the president, Dr. William H. Thomson.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 26th inst., the treatment of nasal stenosis due to deflected septa, with or without thickening of the convex side, will be treated of in a number of short papers by Dr. F. H. Bosworth, Dr. Morris J. Asch, Dr. John O. Roe, of Rochester, Dr. Arthur Watson and Dr. E. Baldwin Gleason, of Philadelphia, and Dr. Henry Beaman Douglass.

At the next meeting of the Section in Obstetrics and

Gynecology, on Thursday evening, the 27th inst., Dr. Grace Peckham Murray will read a paper entitled *The Formative Period of Uterine Fibroids*; Dr. A. H. Goelt will present two cases, one of ectopic-gestation products removed by vaginal section, and the other of a normal appendix vermiformis containing grape-seed removed during oophorectomy; and Dr. H. J. Garrigues will present a case of persistent urachus.

At the next meeting of the Section in Neurology and Psychiatry, on Friday evening, the 28th inst., the following papers will be read: *The Relationship of Latent Tuberculosis to Mental Disorder*, by Dr. E. C. Spitzka; *Exercise Treatment in Tabes Dorsalis*, by Dr. Alfred Wiener; and *Paramyoclonus Multiplex associated with Epilepsy*, by Dr. Pierce Clark. Dr. James J. Walsh will present a case of paralysis agitans sine agitatione.

Two Sides to the Question.—According to the *Medical News* for April 8th, a Minnesota veteran, having given a public testimonial to a patent-medicine firm that its medicine has restored him to perfect health, is now trying to set himself right with the Pension Office, which proposes to take him at his word and cut him off the pension rolls.

The Centennial of the Medical and Chirurgical Faculty of Maryland.—On Tuesday evening, April 25th, there will be an address by the president, Dr. Samuel C. Chew, followed by a reception, and on Wednesday evening Dr. W. W. Keen, of Philadelphia, will give an address on the subject of *The Debt of the Public to the Profession*.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Pathology, on Tuesday evening, the 18th inst., a discussion on the relations between renal elimination and general diseases was opened by Dr. Thomas B. Carpenter, Dr. Henry Ingraham, and Dr. Edmond E. Blaauw.

The Mississippi Valley Medical Association.—We learn that the time of the Chicago meeting has been changed to October 3d to October 6th.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending April 15, 1899:*

BALDWIN, L. B., Surgeon. Ordered to the Key West Naval Station.
BRIGHT, G. A., Medical Director. Detached from the Naval Hospital, Washington, D. C., and ordered home to await orders.
DICKINSON, D., Medical Inspector. Ordered to the Washington Navy Yard for temporary duty at the Naval Hospital.
GATEWOOD, J. D., Surgeon. Detached from the Havana Naval Station and ordered home to await orders.
MARCOU, R. O., Assistant Surgeon. Detached from the Key West Naval Station and ordered to the Havana Naval Station.
PEISSON, R. C., Medical Inspector. Detached from the Naval Hospital, Cavite, Philippine Islands, and ordered to the *Olympia*.
PRICE, A. F., Medical Inspector. Detached from the *Olympia* and ordered home to await orders.
WAGGENER, J. R., Surgeon. Ordered to the *Glacier* for duty in connection with marine battalion, and, on arrival at Manila, is ordered to duty in charge of the Naval Hospital at Cavite.

DIXON, W. S., Medical Inspector. Detached from the Naval Academy and ordered to Washington for duty as a member of the retiring board.

DRAKE, N. H., Surgeon. Ordered to duty as a member of the naval medical examining board, New York.

Du BOSE, W. R., Surgeon. Detached from the Naval Hospital, Brooklyn, and ordered to the Naval Academy.

GAINES, J. H., Surgeon, retired. Granted leave to go abroad for six months from May 6th.

GARTON, W. M., Assistant Surgeon. Detached from the *Supply* and ordered to temporary duty in the hospital, New York.

GRIFFITH, S. H., Surgeon. Detached from duty as a member of the marine examining board, Washington, and ordered to the *Prairie*.

HERNDON, C. G., Surgeon. Detached from the *Prairie* and granted sick leave for two months.

ROSS, J. W., Surgeon, retired. Detached from duty at the Army Hospital, Havana, and ordered home.

SNYDER, J. J., Assistant Surgeon. Detached from the hospital, Newport Naval Station, and ordered to the *Wabash*.

STREETS, T. H., Surgeon. Detached from duty as a member of the naval medical examining board, New York, and ordered to the *Philadelphia* as fleet surgeon.

WAGGENER, J. R., Surgeon. Ordered to San Francisco, California, when the marine battalion is ready for passage to Manila, Philippine Islands.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending April 6, 1899:*

GODFREY, JOHN, Surgeon. Bureau order of March 21, 1899, directing Surgeon Godfrey to proceed to Port Huron, Mich., for special duty, revoked. April 3, 1899.

BANKS, C. E., Surgeon. Detailed as inspector of un-serviceable property in the Hygienic Laboratory, Washington, D. C. March 27, 1899.

PECKHAM, C. T., Surgeon. To proceed to New Orleans, La., for special temporary duty. April 2, 1899.

WHITE, J. H., Surgeon. Relieved from duty at the Immigration Bureau, New York, N. Y., and directed to report at Washington, D. C., for duty. April 1, 1899.

McINTOSH, W. P., Passed Assistant Surgeon. Relieved from duty in Hygienic Laboratory, Washington, D. C., and upon completion of duties as recorder of the Board of Examiners at New York, N. Y., to rejoin station at Louisville, Ky. March 25, 1899.

MAGPHER, G. M., Passed Assistant Surgeon. To proceed without delay to Port Tampa, Fla., and await orders. April 2, 1899.

WERTENBAKER, C. P., Passed Assistant Surgeon. To report at bureau for special duty. April 4, 1899.

NYDERGER, J. A., Passed Assistant Surgeon. To proceed to Wilmington, N. C., for special temporary duty. April 5, 1899.

THOMAS, A. R., Assistant Surgeon. Upon completion of examination to determine fitness for promotion, to proceed to the Tortugas Quarantine Station and assume command of service. March 30, 1899.

CRAMMING, H. S., Assistant Surgeon. Upon completion of examination to determine fitness for promotion, to proceed to the Cape Charles Quarantine and re-

port to the medical officer in command for duty. March 30, 1899.

VON EZDORF, R. H., Assistant Surgeon. To inspect un-serviceable property at the South Atlantic Quarantine Station. April 3, 1899.

ANDERSON, J. F., Assistant Surgeon. Granted leave of absence for thirty days on account of sickness. March 31, 1899.

CORPUS, G. M., Assistant Surgeon. To proceed to Mullet Key, Fla., for special temporary duty. March 27, 1899.

DUDLEY, D. E., Sanitary Inspector. To report to medical officer in temporary charge of the Tortugas Quarantine Station for special temporary duty. March 31, 1899.

SCOTT, E. B., Hospital Steward. To proceed to Savannah, Ga., for special temporary duty. March 24, 1899.

Promotion.

Passed Assistant Surgeon L. L. WILLIAMS commissioned as surgeon. March 30, 1899.

Appointment.

DE KRAFFT, S. C., reappointed acting assistant surgeon, M. H. S., for duty at the port of Cambridge, Md. April 1, 1899.

Appointment Revoked.

Department letter of March 11, 1899, appointing OLIVER STEWART acting assistant surgeon at Port Huron, Mich., revoked. April 4, 1899.

Resignation.

Acting Assistant Surgeon MYRON NORTHRUP, resigned, to take effect March 31, 1899. April 4, 1899.

Society Meetings for the Coming Week:

MONDAY, April 24th: Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, April 25th: Medical and Chirurgical Faculty of Maryland (first day—Baltimore); New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Rome, N. Y., Medical Society; Medical Society of the County of Putnam, N. Y. (annual); Boston Society of Medical Sciences (private); Hunterdon, N. J., County Medical Society (Flemington); Litchfield, Connecticut, County Medical Society (semiannual); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, April 26th: Medical and Chirurgical Faculty of Maryland (second day); New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Middlesex, Massachusetts, North District Medical Society (annual—Lowell); Gloucester, N. J., County Medical Society (quarterly); Philadelphia County Medical Society.

THURSDAY, April 27th: Medical and Chirurgical Faculty of Maryland (third day); New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurol-

ogy; Roxbury, Massachusetts, Society for Medical Improvement (annual); Pathological Society of Philadelphia (conversational).

FRIDAY, April 28th: New York Clinical Society (private—annual); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Births, Marriages, and Deaths.

Married.

COHEN—ROTHSCHILD.—In Hamburg, Germany, on Tuesday, April 4th, Dr. Joseph Cohen, of New York, and Miss Golda Rothschild.

COOK—HAIGHT.—In Fayetteville, North Carolina, on Wednesday, April 12th, Mr. Howard Martin Cook and Miss Rebecca Devereux Haight, daughter of Dr. Thomas Devereux Haight.

HOWE—COOPER.—In Westfield, N. J., on Wednesday, April 12th, Dr. William G. Howe, of New York, and Miss Mary G. Cooper, daughter of Dr. Sherman Cooper.

HUNTER—DICKSON.—In Louisville, Kentucky, on Wednesday, April 12th, Dr. Dwight Williams Hunter, of New York, and Mrs. Margaret Donigan Dickson.

OBERLIN—WOLFF.—In Mansfield, Ohio, on Wednesday, April 12th, Dr. Thomas William Oberlin, of Hammond, Indiana, and Miss Duer Lenore Wolff.

POWELL—FEITNER.—In New York, on Wednesday, April 12th, Mr. Irwin Augustus Powell, son of Dr. Seneca D. Powell, and Miss Marie Sidney Feitner.

QUINTON—BROOKS.—In Rutland, Vermont, on Tuesday, April 11th, Dr. W. W. Quinton, United States Army, and Miss Pauline Brooks.

SEDGWICK—HUDSON.—In Boston, on Tuesday, April 11th, Dr. William R. Sedgwick and Miss Vianna Hudson.

SMITH—BOULIGNY.—In New Orleans, on Saturday, April 15th, Dr. Augustin J. Smith, of Franklin, Louisiana, and Miss Marie Bouligny.

SOMERS—GREELEY.—In Ogdensburgh, N. Y., on Wednesday, April 12th, Dr. Elbert Mortimer Somers, Jr., and Miss Harriet Gilbert Greeley.

WEEKS—AHERN.—In New York, on Monday, April 17th, Dr. Charles Louis Weeks and Miss Lavinia Ahern.

Died.

EVERETT.—In Middletown, N. Y., on Sunday, April 9th, Dr. Harvey Everett, aged eighty-eight years.

GIBSON.—In Colorado Springs, Colorado, on Monday, April 10th, Dr. James B. Gibson, aged thirty-five years.

KITTREDGE.—In Salem, Massachusetts, on Monday, April 10th, Cornelia L. Kittredge, wife of Dr. Thomas Kittredge.

LAFFERTY.—In Richmond, Virginia, on Monday, April 10th, Dr. Walter B. Lafferty, of Crozet, Virginia.

LOUGHAN.—In Kingston, N. Y., on Tuesday, April 11th, Dr. Robert Loughan, in the sixty-fourth year of his age.

MCDONALD.—In Shiremanstown, Pennsylvania, on Tuesday, April 11th, Dr. David L. McDonald, aged fifty-seven years.

PAYNE.—In Poughkeepsie, N. Y., Dr. John Chester Payne, in the eightieth year of his age.

Letters to the Editor.

KERNIG'S SIGN IN THE DIAGNOSIS OF MENINGITIS.

27 WEST ONE HUNDRED AND FIFTEENTH STREET,
NEW YORK, April 15, 1899.

To the Editor of the New York Medical Journal:

SIR: In to-day's number of your *Journal* I find a short notice on Kernig's Sign in the Diagnosis of Meningitis. Henoch, in his work on *Diseases of Children* (German edition of 1895), says that this symptom is not pathognomonic, since it was absent in a very severe case in which the diagnosis was corroborated by autopsy; also that it may be present in other cerebral diseases. He states that this phenomenon is also present to some extent in healthy persons, especially when the trunk is bent slightly forward, making an acute angle with the thigh. Any one can test this for himself.

As for the explanation of this phenomenon, the three long flexors of the knee which have their origin at the tuber ischii (semitendinosus, semimembranosus, and biceps) are highly tense and contain very many short fibres. Such a stretching as a simultaneous flexion at the hip and extension at the knee would render necessary is impossible. In the cadaver, also, this can not be done.

In meningitis, owing to the increased "tonus," the muscular resistance is still greater than in the healthy state.

C. HERRMAN, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XV.

RIGHTS AND LIABILITIES OF THIRD PARTIES.

(Continued from page 558.)

Rights of Third Parties.—Having examined those cases in which third parties are liable to both the physician and patient, we will now pass to a consideration of the rights of third parties.

Rights of Husband.—It has been observed that the husband is subject to certain liabilities arising from the treatment of his wife; it is therefore natural to suppose that he has certain rights in the premises which should be respected.

In case it becomes necessary to operate upon a patient, is it necessary to first obtain consent from her husband? In the case of *McClallen vs. Adams*, a husband placed his wife under the care of a physician whom he knew, at a distance from his own residence, for treatment for a scrofulous tumor of the breast; while the wife was under the doctor's care a cancerous condition developed, and the physician without the husband's knowledge amputated the breast, from which operation

the patient never recovered. The court was of the opinion that the husband, in placing his wife in the care of the physician under the circumstances stated, "impliedly requested him to do all such acts, and adopt such course of treatment and operations, as in his judgment would be most likely to effect her ultimate cure and recovery, with the assent of the wife, and therefore that the operation in question was within the scope of the authority given him." The court, commenting upon the case, further said: "Although it might have been an act of prudence in the [physician] to give the [husband] notice of the situation of the wife, and of his intention to perform a dangerous operation, yet we think he might safely trust to the judgment of the wife, to give her husband notice from time to time of her situation and intentions, and that it was not necessary, in point of law, for the [physician] to give such notice, or to have any new request or authority."*

The court, in the case of *State, etc., vs. Housekeeper et al.*, decided in 1888, in considering a similar state of facts, said: "The consent of the wife, not that of the husband, was necessary. The professional men whom she had called in and consulted were the proper persons to determine what ought to be done. They could not, of course, compel her to submit to an operation, but if she voluntarily submitted to its performance, her consent will be presumed, unless she was the victim of a false and fraudulent misrepresentation, which is a material fact to be established by proof." In this case the evidence showed that the wife had been afflicted with a lump in her right breast, supposed to be an innocent tumor, but afterward ascertained to be a cancer. The physicians operated for cancer, removing the entire breast. The husband testified that he supposed the operation was for the purpose of removing a tumor, and that he would never have consented to the operation which was performed. The evidence did not show whether the wife was informed of the character of the operation to be performed, but the court stated the law relative to this question as follows: "The party who allows a surgical operation to be performed is presumed to have employed the surgeon for that particular purpose."†

It is a rule as old as the common law itself that the husband is entitled to the society and services of his wife; if, therefore, the physician, through improper care or inattention, prolongs the sickness of the wife, he can be held to respond in damages to the husband for the value of his wife's society and services during such period of prolonged sickness, also for the expense he is put to in caring for her during this period.‡

And, finally, when the wife dies, the husband is entitled to have her body in the condition in which the breath leaves it for the purpose of interment. Should the physician violate this right and perform an autopsy upon the body without the consent of the husband, it seems well settled that he can be held to respond in damages to the husband; the amount of damages would be assessed by the jury, and the principal element upon which it would be based would be the injury to the husband's feelings.§

This right to the body of the deceased is primarily

* *McClallen vs. Adams*, 19 Pick. 3.

† *State, etc., vs. Housekeeper et al.*, 21 Me. 107, 16 Vt. Rep. 388.

‡ *Stevon vs. Tullman*, 50 Ill. App. 2, 1897; 100 Ill. 371, 37 Minn. 513, 70 N. W. 140.

§ *Foley vs. Phelps*, 57 N. Y. Supp. 431, 1 App. Div. 351.

in the surviving husband or wife; if there is no surviving husband or wife it is in the next of kin.*

Thus a father who places his child in the care of a physician has the right to immediate possession of the body upon the child's death, and can maintain an action against the physician for any violation of this right.†

This proposition is, of course, to be understood with the qualification that, where the circumstances of the death are such as to render a coroner's inquest necessary, the physician who performs the autopsy under the coroner's orders is protected in so doing if he treats the body with ordinary decency and does not wantonly or unnecessarily disfigure it.‡

It has been observed that the doctor's duty requires him to sometimes destroy property which is infected with any contagious disease; but when such property belongs to third parties, have they any recourse against the physician who ordered its destruction?

A case occurred in Maine in 1874 in which the owner of a house in which small-pox patients had been, sued the physician for ordering the paper removed from the wall, the plaintiff claiming that its removal was not necessary to properly disinfect. The trial court gave the plaintiff a judgment of thirty-five dollars against the physician, but the supreme court sent the case back with an opinion of law which relieved the physician from all liability in the premises. In this case the court, speaking through Justice Walton, said: "When the small-pox or any other contagious disease exists in any town or city the law demands the utmost vigilance to prevent its spread. . . .

"To accomplish this object, persons may be seized and restrained of their liberty or ordered to leave the State; private houses may be converted into hospitals and made subject to hospital regulations; buildings may be broken open and infected articles seized and destroyed, and many other things done which, under ordinary circumstances, would be considered a gross outrage upon the rights of persons and property. This is allowed upon the same principle that houses are allowed to be torn down to stop a conflagration. *Salus populi est suprema lex*—the safety of the people is the supreme law—is the governing principle in this case.

"Where the public health and human life are concerned the law requires the highest degree of care. It will not allow of experiments to see if a less degree of care will not answer. The keeper of a furious dog or mad bull is not allowed to let them go at large to see whether they will bite or gore his neighbor's children . . . nor is one using a steam engine to see how much steam he can possibly put on without bursting the boiler. No more are those in charge of small-pox patients allowed to experiment to see how little cleansing will answer; how much paper spit upon and bedaubed with small-pox virus it will do to leave upon the walls of the rooms where the patients have been confined. The law will not tolerate such experiments. It demands the exercise of all possible care. In all cases of doubt the safest course should be pursued, remembering that it is infinitely better to do too much than to run the risk of doing too little."

It will seem conclusive after reading this forcible opinion that third parties have no right whatever to interfere with the physician in taking such reasonable steps as he deems necessary for perfect disinfection, and

that he can only be held responsible for or restrained from wholly unnecessary or willful destruction.

A peculiar case touching the liability of a physician to a third party recently arose in Massachusetts. A physician was employed by a father to examine a young man, who was engaged to be married to his daughter, to determine whether or not he was affected with a venereal disease. The young man had accidentally injured himself, and the physician, after making the examination, reported that he was suffering from gonorrhoea, by virtue of which statement the engagement was broken off.

The injured man sued the physician, and the supreme court held that if he did not possess ordinary skill and learning, and use ordinary diligence and care in their exercise, he was liable to the plaintiff, and that the breaking of the plaintiff's marriage engagement in consequence of the wrong diagnosis was not too remote a damage to sustain the action.* Whether or not he did possess ordinary skill and learning and exercise proper care and skill in conducting the examination, was a question for the jury to determine from the evidence adduced at the trial.

Pith of Current Literature.

Hygienic Underclothing.—Dr. Thoma, of Berlin (*Therapist*, March 15th), recommends underclothing made up in a double layer—the inner layer, or that nearest the skin, being ribbed so as to contain between the ribs a large quantity of air; the outer layer being smooth, plain, and very porous. There is thus a continuous but gradual interchange between the external air and that in contact with the surface of the body, so preventing sudden cooling. Wool he considers an unhygienic material to wear next the skin. On this point he observes that persons who wear woollen underclothing for the first time complain of itching, which disappears by degrees, and after some months no unpleasantness of any kind is noticed. If we, however, examine the sensitiveness of the skin of a person who has worn woollen underclothing for years, we find that slight electric currents are no longer felt, while others who have always worn cotton or linen underclothing can feel these currents very distinctly. The sensitiveness of the nerves of the skin, therefore, is reduced by the continuous irritation of the wool, and becomes deadened. The degree of sensitiveness of the peripheral nerves, however, affects reflex action, upon which depend the contraction and dilatation of the smallest vessels, which is equivalent to the action of the skin.

Woollen underclothing, therefore, if covering the skin *directly*, reduces the action of the skin *indirectly*, thereby diminishing the resistant power of the body to external influences of temperature.

Cotton absorbs perspiration too slowly and conducts heat too well, while linen allows perspiration to evaporate too quickly, causing chills. The material he recommends consists of a ribbed inner layer of cotton from which the oil has previously been extracted, and which does not absorb the perspiration; and an outer layer of wood wool around which a thread of cotton (from both of which the oil has also been extracted) has been spun, thereby preventing any shrinking of the outer layer when washed. This hygroscopic outer layer receives the

* *Larson vs. Chase*, 47 Minn., 397.

† *Barney vs. Children's Hospital*, 17 N. E. Rep., 161.

‡ *Young vs. College of P. and S.*, 32 Atl. Rep., 177.

* *Harriott vs. Plimpton*, 166 Mass., 585; 44 N. E. Rep., 992.

perspiration of the body, in the form of vapor, thus keeping the inner layer dry. The disadvantage of cotton—viz., its non-absorbent property—he considers of real advantage to the underclothing he recommends, and the hygroscopic wool does not come in contact with the body.

Nephritis from a Medico-legal Point of View.—Dr. Harold N. Moyer (*Journal of the American Medical Association* for March 25th), at the Chicago Academy of Medicine on February 28th, called attention especially to two legal relations which the kidneys had, and which, he said, were not referred to in the books. The first dealt with the possibility of an injury to the kidney, shown by the presence of blood sometimes, by the presence of albumin always, and sometimes by casts in the urine. He had met with three such cases which were subjects of medico-legal inquiry, the parties having brought suit in consequence of the injuries. Among the symptoms of those cases were the points just named. One case longer under observation than the others was that of a man injured by being run over. A heavy wagon had passed over the loins, and together with some rather insignificant nervous symptoms he presented a copious hematuria, followed by albuminuria and casts in the urine. This lasted for some weeks. There were no vascular changes, and prior to the accident in question the man had always been well. He made a perfect recovery. Dr. Moyer examined his urine at intervals for two years following the injury. He believed that the patient had sustained a serious injury to the kidney, which produced albuminuria and casts, and which subsequently cleared up. He had seen two similar cases, but they had not been so well studied. It was possible that injuries of the kidney might have a medico-legal interest in a case of ordinary damage suit.

The other point to which he would specially direct attention was uræmia. We might have uræmia without appreciable alteration in the kidneys. He believed that it was responsible for some cases of sudden death. Cases were met with by those who made examinations of dead bodies to ascertain the cause of death for medico-legal purposes in which absolutely no change could be found in any of the vital organs—the brain, heart, lungs, and kidneys were seemingly normal. Death by the heart or by the brain almost always left distinct traces that could be seen post mortem. He had believed for some time that uræmia explained some of the peculiar and by no means rare, cases. The experimental data which had been accumulated regarding the relation of the kidneys could not be explained on any other theory than that in uræmia we had an exceedingly complex poison, not necessarily one that failed to be eliminated by the kidney. These symptoms might gradually appear from some disturbance in the metabolism of the tissues or of the vital organs other than the kidneys, and present identical symptoms with those that followed advanced kidney disease. He believed some of the cases of sudden death attended by coma were explainable in this way. The subject was an important one from a forensic standpoint.

A Singular Tubal Pregnancy. M. Pollosson (*Revue médicale de Lyon*, March 7th) reported recently to the Medical Society of Lyons the case of a woman, aged one year of age, who had previously had four pregnancies advancing to term. There were no signs referable to the uterus or annexa. In fact, no signs

logical symptoms. The pregnancy was presumably advanced about six weeks. The patient suffered from intractable vomiting, and but for the normal pulse M. Pollosson would have practised abortion at once. After some weeks of ineffectual medication he proceeded to perform abortion. Dilating the uterus with Hegar's bougies, he found the abdomen supple, and bimanual examination discovered a tumor of the size of an orange in the pelvis. The cervix uteri seemed to depend from this tumor, which was naturally supposed to be the body of the uterus. When dilatation was complete, M. Pollosson inserted his finger into the uterus and found it empty. Passing the finger forward, he found an opening beyond the cervix, into which he introduced his finger, wondering whether it connected with the peritoneum or bladder. A sound passed into the bladder proved the latter to be intact. There was a pouch in front of the uterus, above the neck and external to the peritoneum, from which he extracted a fetus as long as his finger with a head of about the size of a nut, and its placenta. The uterus and the cavity were plugged with iodoform gauze, and the patient made an uneventful recovery. Extra-uterine gestation sacs are usually situated either laterally or in the posterior cul-de-sac, though Pinard states that he has seen a case where the seat was anterior.

The Removal of the Uterus for Placenta Prævia.—Lawson Tait (*Lancet*, February 25th; *American Journal of Obstetrics and Diseases of Women and Children*, March), after considering the mortality consequent upon "unavoidable hæmorrhage," says that one aspect from which it is extremely interesting is that it is one of the few points in the practice of surgery where our conduct may be influenced by ecclesiastical authority. The Church of Rome rules that in such a case the living birth of the child is all-important, and when the interests of mother and child conflict those of the former must yield. In one case to which he was called by the late Dr. Wynne Thomas this decision, arrived at by the mother and the father of the child, as advised by their spiritual directors, seemed to the doctor to cost the mother her life, though it did save the child. Under such circumstances that part of the treatment directed against the immediate risk from hæmorrhage has its influence for good directly contravened, and probably entirely annulled, by the causes introduced and the risks produced of secondary mortality. All these conditions existed in a case to which he was called on December 21, 1898, by Dr. Herbert Simpson, of Rugby. The patient was young and slightly built, and had as bad a history of hæmorrhage as a woman well could have. She had always had "something wrong" inside and had been a regular consumer of ergot for years. She had been twice cured and cauterized. She had nearly lost her life from postpartum hæmorrhage in her second confinement, had had several miscarriages with severe losses, and he found her in great distress and faint at the full time with a cervix dilated to the third finger and amniotic fluid off, the uterus being very large, over the child, and yet she had been feeling well and in good condition for five hours, in spite of many attempts at a dozen points of treatment which Dr. Simpson had employed. The child was easily extracted and alive, and the condition of the placenta was such that that of the mother was not put in jeopardy. But he confesses that the result of the case was such as made him hesitate to do what he had been told to do.

forcefully dilate the cervix and extract the placenta, whether he followed that by version or not, whether or not he left the after-labor to Nature and the child to its fate. An alternative occurred to him to which he was prompted by the splendid success which has followed it in his hands and in those of others under different yet very analogous circumstances—viz., removal of the uterus. It had many arguments in its favor: it would save the child, it probably would save the mother, and it would relieve her of the condition of perpetual misery and risk in which she had been living for years, and would therefore assist her in properly rearing the children she had, rather than in tending to procreate others to whom she certainly showed no likelihood of ever being able to give proper care. There were no arguments against it except the familiar one of "mutilation." As he had already characterized that as the argument of the brothel-keeper rather than one for the consideration of the physician, he attached little importance to it. Putting himself in the place of the patient's husband, so far as he could, he felt that the Church of Rome had some reason for its decision, though more as a matter of right than of salvation—that any proceeding which would diminish the mother's risk from fifty per cent. or forty per cent., or even twenty per cent., to four or five per cent., must be selected. Finally, the argument would have been overwhelming to him as a husband that his wife would have health and comfort for her after-life, instead of misery and risk, irrespective of sterility or mutilation or anything else. He therefore proposed hysterectomy, and after full discussion it was accepted by Dr. Simpson, by the husband, and by the patient. He performed it with the aid of the elastic ligature, by the operation known in America as the "Tait-Porro" operation. The patient made a straightforward recovery, interrupted only by occasional rectal distention. A fine female child was born alive and lived for a month, succumbing, unfortunately, a month after birth, when the cold weather distributed bronchitis. This case forms, so far as he knows, a new departure. Whether it will receive a universal commendation is not the least a matter of doubt. The "mutilationists" will raise their voices against his proposal, but there are others who will follow his example, and to those who do this will surely come the comfort that they will diminish "the anxiety to the practitioner and the real danger to the patient" of the obstetric difficulty which Simpson so graphically tells us has more of both than any other.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of December 7, 1898.

The President, Dr. S. ALEXANDER, in the Chair.

(Concluded from page 574.)

Logical Analysis in Therapeutics. This was the title of a paper read by Dr. CHARLES E. QUIMBY. (See page 553.)

Dr. EGLETT LE FEVRE said that the paper presented a very clear outline of the fallacies of therapeutics, yet we should not be discouraged, even though we did not

always practise what we preached. Our conceptions of the aetiology of disease had changed so much during the past fifteen years that it was rather a matter of surprise that there had not been more confusion. The lagging of our therapeutics seemed to him to be rather helpful than otherwise. Until the physiological action of drugs had come to the fore with a newer physiology our knowledge of drugs was almost entirely empirical. In animal experimentation was to be found a rational basis for our medication. But we had now another matter to consider—i. e., the question of intoxication in disease. In using the coal-tar products the profession had been running after strange gods. The cause for such heresies was not to be found entirely in the wrong teaching of *matéria medica*. The day of dogmatism had gone by, and the teacher must state candidly that many points remained yet to be cleared up. This allowed the young graduates to go forth with their minds rather too open, and, as a result, they became easy victims of the venders of new medicines.

He agreed to what had been said regarding the abuse of strychnine and the loose way in which it had been administered. He was not willing, however, to go so far as the reader of the paper regarding oxygen. He knew of no physiological experiments or chemical data which would lead us to think that by giving oxygen in the manner indicated in the paper one might expect the much-desired systemic improvement. He had personally been much disappointed in the use of oxygen, particularly in pneumonia. Certainly there was a certain degree of elimination by the lungs, but in diseased conditions, such as pneumonia, in which oxygen was indicated, he doubted if the lung could be sufficiently stimulated to eliminate the gas.

Dr. BRILL said that the profession was becoming nihilistic in its use of drugs, and this was not to be wondered at when it was remembered that the treatment of disease, with few exceptions, was directed toward certain symptoms characteristic of the morbid process to be treated. It was true that medical students were taught the physiological action of drugs, and went out of college with such stimulants as caffeine, strychnine, digitalis, and alcohol, but when they were confronted with disease they were not always able to recognize the necessity for the treatment directed toward the prominent symptoms—for instance, in pneumonia, the prime necessity was to keep up the proper action of the heart. Some used one of these cardiac stimulants alone, and the result being good, this drug alone was used for a long time afterward. When, at last, a patient did not do well, they tried another remedy, and eventually they reached the state of mind in which they believed that there were no good cardiac stimulants—from being therapeutic enthusiasts on leaving college they came to be therapeutic nihilists. All drugs used should be thoroughly tested, and their physiological effects carefully studied and made clear before these remedies were presented to the profession.

Dr. QUIMBY said that in his paper he had desired above all things to disclaim any thought of dogmatism, and that he did not believe an examination of all his published writings would reveal any justification for such an accusation. The statements in the present paper, which had been called dogmatic, were given as logical deductions from accepted data. The logic by which they had been obtained was open to the most rigid criticism, but, however defective or fallacious that might be, it still eliminated all dogmatism. The

later physiology and systemic intoxication as the dominant factor of disease from specific causes, to which reference had been made, had been the fundamental facts upon which he had relied for justification of his paper, since they showed with such perfect clearness not only the beautiful possibilities, the consequent necessity of scientific analysis of pathic process, but drug actions and their antagonistic relations in therapeutics. The expressed disappointment of one of the speakers in the use of oxygen added further support to his position, and of itself justified any honest effort to discover a logical method of the use of that gas. What had been presented was simply the result of such an effort. He desired to express his indebtedness for the interest manifested in the subject.

Book Notices.

Respiratory Exercises in the Treatment of Disease.

Notably of the Heart, Lungs, Nervous and Digestive Systems. By HARRY CAMPBELL, M. D., B. S. Lond., Fellow of the Royal College of Physicians, London, etc. New York: William Wood & Co., 1899. Pp. viii-200.

THE author discusses in the first twenty chapters some of the many physiological problems connected with the mechanism of respiration and the effects of respiratory movements on the circulation and the bodily nutrition. Then the modifications of the respiratory act are taken up and discussed at some length, together with the value of singing and talking as pulmonary gymnastics, and finally, in the last fifty pages, Dr. Campbell turns to the medical consideration of regular, methodical breathing exercises as a method of preventing and in some cases curing pulmonary lesions. These exercises are also to be used, according to the author, in cardiac disease and in disorders of the digestive and nervous systems. The whole discussion of the subject savors rather more of much reading than of actual clinical experience, yet there is much that is suggestive even if not absolutely new, and the style of presentation is clear and attractive.

Die Fremdkörper des Uterus. Zusammenstellung von 550 Beobachtungen aus der Literatur und Praxis. Von Dr. FRANZ L. NEUGIRARER, Vorstand der gynaekologischen Klinik des Evang. Hospitals in Warschau. Zweite Ausgabe. Berlin: S. Karger, 1899. Pp. 111.

THE author has collected in this brochure most of the reported cases of foreign bodies found in the uterine cavity. This title, however, is somewhat misleading, as the collection includes also cases of ectoparasites, some of the uterus, those of substances which may enter the uterine cavity by means of isthmus or by tearing of the course of delivery, and also those of prolonged retention of the fetus in the uterus. Seven cases are given of mummies removed from the uterus which contained fetuses; they probably originated from the rupture of ovarian dermoids into the uterine cavity. Beyond the reports of the findings the author does not go; there is no attempt at anything more than a compilation of the work of others, with the addition of a few important personal cases.

An Experimental Research into Surgical Shock. An Essay awarded the Cartwright Prize for 1897. By GEORGE W. CRILE, A. M., M. D., Ph. D., Professor of the Principles of Surgery and Applied Anatomy in the Cleveland College of Physicians and Surgeons, etc. Philadelphia: J. B. Lippincott Company, 1899. Pp. 5 to 160. [Price, \$2.50.]

THIS essay embodies the results obtained by a long series of experiments on animals to determine, if possible, the anatomical basis of surgical shock. A number of valuable points were observed, bearing chiefly on the value of the methods now in use for the combating of shock as seen clinically. Saline infusions, strychnine, heat, and an inverted posture were found experimentally to relieve most rapidly and surely the condition of low arterial pressure characteristic of shock.

Suprarenal extract was of no value, the initial rise being rapidly followed by a fall. Artificial respiration was useful in many cases. The cause of the condition known as shock was found to be an impairment or breakdown of the vasomotor mechanism, a view long ago advanced by Goltz and since adopted by most writers on surgery.

Les rayons de Röntgen et le diagnostic de la tuberculose. Par A. BÉCLÈRE, Médecin de l'Hôpital Saint-Antoine. Avec 9 figures dans le texte. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 95.

THE author is quite conservative in his opinions on the possibility of the diagnosis of pulmonary tuberculosis by means of the Röntgen rays, and brings out very clearly the fact that shadows and dark patches are quite often seen in the lungs of persons in excellent health. The great advantage of the rays lies in the fact that consolidation in the centre of a lobe can be seen before it can be made out by percussion, but in all cases the final appeal must be made to the bacteriological examination of the sputum or the cautious use of tuberculin. M. Bécère insists strongly on the fact that the person who is to make the fluoroscopic examination should remain for some time previous in a dark room, as his vision by this simple means is rendered vastly more acute than if he comes from a brightly lighted room.

Holden's Human Osteology: Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopic Structure of Bone, and its Development. Edited by CHARLES STEWART, F. R. S., Hunterian Professor of Comparative Anatomy and Physiology, Royal College of Surgeons of England, etc., and R. W. RICH, M. D., F. R. C. S., Regius Professor of Anatomy in the University of Aberdeen. Fourth Edition. London: J. & A. Churchill, 1899. Pp. ix, 358. [Price, \$5.25.]

IN the preface the editor states that revisions have been made in order to bring the book up to the present state of our knowledge. It was, however, a textbook should retain its popularity, and its general conditions and for so long a time, that it would not be changed to suit modern ideas and methods. As the bones have not changed, the revisions have undergone considerable improvement. We can only say that this book is up to the standard of the best recent works on anatomy. It embodies a most excellent description of the bones in general, not only, for instance, should the old description of the thoracic bone be per-

petuated any longer—a description which is most difficult to learn and which in the end gives us no idea of the construction of the bone? The aurist simply has to learn it over again.

The fact is, we are suffering from the popularity of some of our old text-books. They do not need additions, but excisions and complete revision.

The volume before us is printed in handsome type on excellent paper. The cuts, which must have been once a feature of the book, now seem antiquated.

Atlas der Syphilis und syphilisähnlichen Hautkrankheiten für Studierende und Aerzte. Von Dr. med. MARTIN CHOTZEN, Spezialarzt für Hautkrankheiten in Breslau. Heft XI. Pp. 135 to 145. Heft XII. Pp. 147 to 161. Hamburg und Leipzig: Leopold Voss, 1898.

THESE two numbers complete the atlas, of which the previous parts, I to X, have already been reviewed. In these are both colored and uncolored plates. Of the latter, No. 64, No. 65, No. 67, No. 68, and No. 73 are very good, representing perioritis ossium narium, etc. Colored plate No. 70, dealing with the larynx and eye, is also to be praised, but in regard to most of the others the same statements made in previous notices are pertinent. The text accompanying the plates gives the clinical history and treatment of each case from which a drawing was made, and is a very useful feature. A list of various diseases represented in the *Atlas* and a full index complete the work, which pictorially is probably as good as could be expected in view of its low price.

Diseases of the Skin: An Outline of the Principles and Practice of Dermatology. By MALCOLM MORRIS, Surgeon to the Skin Department, St. Mary's Hospital, London, etc. With Ten Colored Plates and Twenty-six Engravings. New and Revised Edition. Philadelphia: Lea Brothers & Co., 1898. Pp. xv-589. [Price, \$3.25.]

IT is with pleasure that Dr. Morris's book is recommended to the profession, though the recommendation given pertains entirely to the text, and certainly not to the colored plates which accompany it. Beginning with general remarks on the pathology of the skin, the author then takes up the classification of skin diseases, which, he truthfully says, is a good servant but a bad master. Unquestionably no greater harm can occur to a dermatologist in the present state of our knowledge than attachment to a classified system of skin diseases, into which *volens volens* each example which comes along is crammed.

Nothing new is found in the chapter devoted to principles of diagnosis, but in dealing with the subject of dermatology it is the manner in which the symptoms, etc., of each cutaneous disease are put, it is the clearness and earnestness of expression characteristic of the observer that make the charm of the book, and causes it to be recognized as the work of one who is well known to be among the very foremost dermatologists of England.

No particular portion of the book can be especially referred to for its superiority, but the whole work is worthy of careful reading. More, for instance, than in any other treatise on cutaneous disease, do we find the rôle of the proœmic organism considered. Categorical statements are not made, nothing absolute is advanced, but the suggestion derived from bacteriological study

and investigations are given and their possible and probable connection with skin diseases is brought forward. Furthermore, in Morris's book it is a relief to find eczema treated particularly upon the basis of its etiology and pathology, and not to come across the time-hallowed eczema vesiculosum, eczema pustulosum, eczema madidans, eczema rubrum, etc., laid out on paper like parterres in a flower garden, regardless of the origin, course, or any other factor active or existing in the production of the disease.

Frankly and heartily can Dr. Morris's book be recommended, and it is to be hoped that such works will replace in the hands of the student the compendiums appearing on all hands, which, like all other short cuts to knowledge, give only a simulacrum of the subject, and are not really satisfactory.

Lectures on Appendicitis and Notes on other Subjects.

By ROBERT T. MORRIS, A. M., M. D., Adjunct Professor of Surgery in the New York Post-graduate Medical School and Hospital, etc. Third Edition, revised and enlarged. With Illustrations by HENRY MACDONALD, M. D. London and New York: G. P. Putnam's Sons, 1899. Pp. x-185. [Price, \$2.]

THE appearance of a third edition shows the demand which exists for works of this character and scope. Many new and valuable ideas have been introduced, including some interesting correspondence from patients. The illustrations are remarkably fine and the whole makeup of the book is excellent.

Manual of Diseases of the Skin. With an Analysis of Twenty Thousand Consecutive Cases and a Formulary. By L. DUNCAN BULKLEY, A. M., M. D., Physician to the New York Skin and Cancer Hospital, etc. Fourth Edition, revised and enlarged. New York and London: G. P. Putnam's Sons, 1898. Pp. xi-362. [Price, \$1.25.]

IN this book a brief description of cutaneous diseases is contained. The first chapters deal with the anatomy and physiology of the skin, with the symptomatology, with nomenclature, with the relative frequency of skin diseases, etc. The use of the chapter on the relative frequency of these diseases is certainly not apparent; for how profits it a student to know that psoriasis occurs with a frequency of 3.5 per cent., etc., especially when that frequency is purely relative and individual to the observer? It may, for instance, be stated, as showing the value of such tables, that out of over two hundred thousand cases collected and classified by the American Dermatological Association for the years 1878 to 1893, only four hundred and nine cases of clavus occur. And yet, who has not a corn?

With chapter vii the description of the symptoms, diagnosis, and treatment of the various cutaneous eruptions begins, and in the succeeding pages the majority of them receive more or less attention according to their relative importance. The major symptoms pertaining to diagnosis are given briefly, and in a succinct manner. Etiology receives due attention, but pathological anatomy is not mentioned. As may be expected from the author's previous writings, an internal origin for the majority of skin diseases is emphasized, and in that regard his convictions are unmistakably apparent. The possibilities of microbial origin are allowed, but yet looked upon somewhat askance, the internal and systemic con-

ditions being of particular importance. Treatment receives much attention, and the suggestions in the text are supplemented by an elaborate formulary, from which may be culled every variety of remedy pertaining to the cure of skin diseases.

As a whole, the book may be said to be a personal one, representing the author's views especially, and giving a short but clear clinical picture of skin diseases, which will be of use to those who do not care to go more deeply into the subject.

Diagnosis by the Urine, or the Practical Examination of Urine, with Special Reference to Diagnosis. By ALLARD MEMMINGER, M. D., Professor of Chemistry, Urinology, and Hygiene in the Medical College of the State of South Carolina, etc. Second Edition, enlarged and revised. With Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. viii+9 to 124. [Price, \$1.]

THIS little volume furnishes the student with an excellent guide for his first studies in the relations between the changes in the urine and disease. No doubts or difficulties are allowed to appear in the text, and the mind is therefore not distracted by the necessity of remembering the numerous exceptions which unfortunately greet the young practitioner.

BOOKS, ETC., RECEIVED.

A Text-book on Practical Obstetrics. By Egbert H. Grandin, M. D., Gynecologist to the Columbus Hospital, etc. With the Collaboration of George W. Jarman, M. D., Instructor in Gynecology in the Medical Department of Columbia University, etc. Second Edition, revised and enlarged. Illustrated with sixty-four Full-page Photographic Plates and Eighty-six Illustrations in the Text. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1898. Pp. xiv+3 to 461. [Price, \$4.]

Diseases of the Ear, Nose, and Throat, and their Accessory Cavities. By Seth Scott Bishop, M. D., D. C. L., LL. D., Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College, etc. Second Edition, thoroughly revised and enlarged. Illustrated with Ninety-four Colored Lithographs and Two Hundred and Sixteen Additional Illustrations. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1898. Pp. xiv+3 to 551. [Price, \$4.]

Transactions of the American Pediatric Society, Tenth Session, held in Cincinnati, June 1, 2, and 3, 1898. With an Index of Volumes I to X. Volume X.

The Bertillon Classification of Causes of Death Recommended for the Use of Registrars of Vital Statistics (after the First Revision of Paris, 1900) by the American Public Health Association and by the Conference of State and Provincial Boards of Health of North America. Issued under the Auspices of the American Public Health Association.

Pelvic Neuritis, or Inflammation of the Pelvic Nerve in Women. By William O. McDonald, M. D. [Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children*.]

Il Nervosismo di questa fine di secolo. Per il Professore Leonardo Bianchi. [Estratto da *Elegia*.]

In causa d'impotenza. Pel Professore Leonardo Bianchi. Napoli: Gennaro Maria Priore, 1898.

La Truffatrice internazionale. Periza medico legale sulle condizioni mentali della signora Sibilla Priore.

Pel Leonardo Bianchi. [Estratto dalla *Rivista mensile di psichiatria forense, antropologia criminale e scienze affini*.]

Su le idee fisse lezione del Professore Leonardo Bianchi. [Estratto dalla *Clinica moderna*.]

Contributo alla diagnosi e alla cura della artralgie isteriche. Nota clinica pel Professore Leonardo Bianchi.

Miscellany.

The Hours of Drug Clerks.—"By a vote of 99 to 26," says the *Sun*, "the assembly has passed the bill restricting the hours of labor of the clerks of pharmacists and druggists in this town to twelve hours on Saturdays, six hours on Sundays, and ten hours on other days. In moving to recommit the bill, Mr. Henry asserted that it was opposed by nine tenths of the drug clerks, and that not a single drug clerk had appeared before the committee to favor the bill. The supporters of the measure lamely retorted that while the drug clerks had not appeared in person, they had been represented by 'labor organizations' to which they belonged.

"We venture to say that among the drug clerks of this town, a class of men as industrious and as ambitious as other men are, and, as a rule, intelligent beyond the average, there are very many who do object to and resent this attempt of the legislature to interfere with their business and diminish their wages. For if the bill becomes a law, and the law is enforced, their wages must be reduced as their hours of labor are diminished. If those hours are too long, they have the privilege of American citizens to seek other employment, but they do not need to be protected by the State or to have their day's work fixed by it as if they were children or feeble-minded. The fact that some of them put up prescriptions and sell medicines gives no ground for the interference of the State. The negligent labor of a steel-maker, an iron-molder, a mason, a carpenter, of any man in any occupation, may cause accident and death; nor can negligence and incompetency be suppressed by legislatures, even in the *Revised Statutes* themselves. The drug clerks should be left free to work so long as they choose, and their hours are no more a proper subject of legislation than those of bakers and candlestick makers.

"It would be highly convenient if nobody had to work, and no doubt the wisdom of legislatures will in time repeal the curse and forbid the sweat of the brow; meanwhile the drug clerks and the rest of us ought to be allowed to work according to our will, without being hampered by the philanthropy that meddles ignorantly with other people's business."

The American Public Health Association.—The chairman of the laboratory committee has issued the following preliminary notice: At the meeting of the American Public Health Association, September, 1898, it was decided to organize a standing committee of the association composed of those actively engaged in laboratory work in connection with health boards.

During the past few years the chief development in sanitary science has been in connection with laboratory work, especially bacteriological, so that every health board of importance now requires a special laboratory staff.

Thus, within a few years, the number of laboratory men actively engaged in hygienic work and research has increased a hundredfold. The necessity of some central organization which could further the development of sanitary laboratory work in both scientific and practical directions seems very obvious, and it would be of the utmost value to health boards if arrangements could be made by which their laboratory representatives could meet with those of other boards. It is hoped that as many as possible of the sanitary laboratories on this continent will be represented on the laboratory committee by some one who will be able to attend the meetings of the association.

The American Public Health Association has by its work in the past not only laid claim to be our central sanitary body as far as organization is concerned, but the work already done under its auspices in connection with the standardizing of methods of disinfection and methods of bacteriological investigation are fine examples of what may be accomplished by cooperative means.

The intention of the laboratory committee is not to overlap or interfere with the work of other committees, but as far as possible to help them in their work, and it is desirable that members of other committees engaged in laboratory work should be regarded as *ex-officio* members of the laboratory committee.

It has been found at the meetings of the association that there is a practical difficulty in introducing papers and discussions of a technical nature into the general proceedings, while, on the other hand, those matters which most interest laboratory men must be essentially of a technical nature. It has therefore been decided to hold sessions of the committee during the day or two preceding the general meeting or in spare time between the regular sessions.

A temporary organization has been effected, and the first general session of the committee will be held on October 30th, the day previous to the opening session of the general meeting in Minneapolis, in November, 1899.

Professor Welch, of Baltimore, has kindly consented to be honorary chairman. The work of arranging the programme has been undertaken by Dr. F. F. Westbrook, of Minneapolis, who in cooperation with Dr. Probst, general secretary, will decide which papers are of a technical nature, more suited to laboratory committee sessions than for general meetings.

Dr. A. Gehrman, of Chicago, has undertaken the editing of the proceedings and publication of the minutes of the meeting.

The line of work proposed is as follows:

1. Original short papers upon laboratory work and research. Summary reports of work accomplished during the year in the various laboratories.

2. Cooperative investigations, as on disinfection, water analysis, etc.

3. Short summaries of progress during the year in special lines of work.

Those engaged in laboratory work bearing upon hygiene are eligible as members, and those wishing to become members will kindly address the chairman, Dr. Wyatt Johnston, 74 Shuter Street, Montreal.

A Medical Bicyclist's Novel Defense. We learn from the London correspondent of the *American Practitioner and News* for March 15th that a doctor who was summoned at Portsmouth, England, for riding a bicycle on the footpath raised a novel defence. He stated that there was an act of Parliament which gave a doc-

tor permission to take the shortest cut when on his way to visit an urgent case. After an adjournment to allow him to produce the act, the magistrates decided in his favor.

The Late Dr. Timothy J. McGillicuddy.—At a regular meeting of the New York Celtic Medical Society the following resolutions were adopted:

The New York Celtic Medical Society has learned with profound sorrow of the death of our fellow member, Dr. Timothy J. McGillicuddy, who died of pneumonia on the seventeenth day of January, 1899, after a few days' illness and before many of his old friends realized that he was ill. The society has suffered a great loss in his death, and the profession a blow that it has keenly felt. He was one of the founders of this society, and we, its members who live to-day to enjoy its associations, feel greatly indebted to our deceased brother for bringing the organization to its present standing. The doctor was a constant attendant at our meetings and participated in the various discussions with a zeal peculiarly his own. He was a man of rare attainments, wise judgment, and honest purposes, "with charity to all and malice toward none." His writings and contributions to medical literature stand out to-day to his memory, and we, his associates, feel proud of him as a member.

Resolved, That in the death of Dr. McGillicuddy the Celtic Medical Society has lost one of its ablest and most valued members, and the science of medicine a scientific laborer and faithful investigator, and that the deep feeling of sympathy of this society be extended to his family in this hour of their deep sorrow, and that a copy of this memorial be forwarded to his family and also be published in the medical journals.

[Signed.] M. C. O'BRIEN, M. D.,
F. J. QUINLAN, M. D.,
G. D. MCGAURAN, M. D.

The New York Neurological Society.—Officers for the ensuing year were recently elected as follows: President, Dr. Frederick Peterson; vice-presidents, Dr. Joseph Collins and Dr. L. Stieglitz; recording secretary, Dr. Pearce Bailey; corresponding secretary, Dr. L. A. Conner; treasurer, Dr. Graeme M. Hammond; councillors, Dr. C. L. Dana, Dr. M. A. Starr, Dr. B. Sachs, Dr. E. B. Fisher, and Dr. J. Arthur Booth.

The Falsetto Voice.—At a meeting of the Orleans Parish Medical Society, of New Orleans, held on April 8th, Dr. de Roaldes presented a patient whom he had treated for falsetto voice. The man had previously appeared before the society and was now shown again in order that the change in his voice might be appreciated. The affliction dated from an attack of measles when the man was about fifteen years old. After an examination of the larynx, which was in a normal state, he was promised early relief if he placed himself entirely under Dr. de Roaldes's control and carried out a prescribed system of vocal exercise. After ten days' treatment the voice had changed from a high-pitched falsetto to a full barytone. Such voices, said the speaker, while resembling that of the eunuch, were entirely different. The trouble was easily relieved, while the eunuch's was due to lack of development and was incurable. The majority of persons with a falsetto voice breathed incorrectly; the abdominal muscles were contracted and respiration was shallow. The first step in the treatment was to correct this by deep and silent inspiration

followed by expiration. The vowels were then pronounced during expiration and the words gradually increased. The treatment lasted for an hour or two, and some did not require further direction. It was best to carefully guard them for a few days, however, as a return of the condition might occur. An attendant should be constantly with the patient and correct any change in the tone of voice for at least twenty-four hours.

Displacement of the Testicles.—At the same meeting Dr. Hamilton P. Jones related the case of a man who had recently consulted him, thinking he was a eunuch. During an encounter he had been struck on the scrotum, causing nausea and great pain. Next day he noticed that his testicles had disappeared from the scrotum and they had never reappeared. Examination revealed the absence of the testicles from the scrotum. The right testicle was found well up near the inguinal ring. At a corresponding point on the left side a fluctuant tumor was found, which was not painful when pressed upon. He was seventeen years old when the blow was received, and since that time sexual intercourse had not been attempted. Believing himself incapable of coition, he desired an operation for the replacement of the testicles. Dr. Jones declined to attempt any operation, thinking that the young man's extreme lack of confidence in himself was the most prominent cause of his condition.

Notice to Rectal Specialists.—At the time of the meeting of the American Medical Association in Columbus, on June 6th, 7th, 8th, and 9th, there will be a meeting of medical men engaged in the practice of proctology, for the purpose of organizing a society for the study of that specialty. Physicians interested in the project are requested to address Dr. William M. Beach, No. 515 Penn Avenue, Pittsburgh, Pennsylvania.

Dr. Achilles Rose.—We learn that Dr. Rose's book *Christian Greece and Living Greek* is to be translated into German and published in Leipzig; also that Dr. Rose has been asked to assist the editors of Roth's *Klinische Terminologie* in preparing the sixth edition of that work.

The Barnes Medical College, of St. Louis, held its commencement exercises on Wednesday evening, April 12th. The graduating class consisted of two hundred and three gentlemen.

The Sixtieth Anniversary of the Colored Home and Hospital is to be celebrated on Saturday afternoon, April 29th, at half-past three o'clock. The occasion will be of special interest in that the main feature is to be the dedication of the new buildings erected last year at One Hundred and Forty-first Street and the Southern Boulevard. These buildings include a distinct general hospital department with a modern operating room, a maternity pavilion, and a phthisis pavilion, in addition to a convalescent and home department. During the afternoon all these will be thrown open to the friends of the institution and to the medical profession.

Mr. Hamilton Mabie, Mr. Booker Washington, and the Hon. John W. Keller, president of the commissioners of charities, are to be the speakers of the occasion.

The Association of American Physicians. The fourteenth annual meeting will be held in Washington, on Tuesday, Wednesday, and Thursday, May 23d, 24th, and 25th. The programme contains the following titles: Idiopathic Dilatation of the Colon (Congenital), by Dr.

J. P. Crozer Griffith, of Philadelphia; The Relation of Idiopathic Dilatation of the Colon to Phantom Tumor, by Dr. R. H. Fitz, of Boston; A Case of Presystolic Mitral Murmur associated with Systolic Tricuspid Murmur and Jugular Pulse, by Dr. James Tyson, of Philadelphia; A Case of Mitral Stenosis with Fever (Non-malarial) of Relapsing Type, by Dr. F. P. Henry, of Philadelphia; The Immediate and Remote Effects of Athletics upon the Heart, by Dr. Alfred Stengel, of Philadelphia; On the Interpretation of Pulse Tracings, by Dr. A. R. Cushny, of Ann Arbor, Michigan; On the Operative Treatment of Spinal Tumors, by Dr. J. J. Putnam and Dr. J. Collins Warren, of Boston; On Tabes, by Dr. M. Allen Starr, of New York; On Kernig's Sign in Meningitis, by Dr. J. B. Herrick, of Chicago; On Astasia-abasia, with a Report of a Case, by Dr. J. C. Wilson, of Philadelphia; A Case of Family Periodical Paralysis, by Dr. J. K. Mitchell, of Philadelphia; The Continued Fever of Epidemic Influenza, by Dr. W. W. Johnston, of Washington; Relapse in Typhoid Fever, by Dr. William Osler, of Baltimore; Some Remarks on Typhoid Fever among the American Soldiers in the Recent War with Spain, by Dr. Victor C. Vaughan, of Ann Arbor, Michigan; Further Notes on a Case of Malta Fever, by Dr. J. H. Musser, of Philadelphia; Otitis Media in the Lobar Pneumonia of Children, by Dr. S. J. Meltzer, of New York; Endocarditis of Tonsillar Origin, with a Report of Five Cases, by Dr. F. A. Packard, of Philadelphia; A Case of Fatal Epistaxis, with a Study of the Blood, by Dr. George Dock, of Ann Arbor; On the Diplococcus Form of the Colon Bacillus, by Dr. J. G. Adami, Dr. Maud E. Abbott, and Dr. F. J. Nicholson, of Montreal; The Organism of a Case of Blastomycetic Dermatitis, by Dr. L. Hektoen, of Chicago; Tumors involving the Hypophysis, by Dr. James Stewart, of Montreal; Demonstration of an Acromegalic Skeleton, by Dr. W. P. Thayer, of Baltimore; The Application of Thyroid Extract in the Treatment of a Cerebral Neoplasm, by Dr. Starling Loving, of Columbus, Ohio; The Action of Hepatic, Renal, and other Cells upon Phenol and Indol, under Normal and Pathological Conditions, by Dr. C. A. Hexter, of New York; Experimental Research disproving the Theory that Paraxanthin Poisoning is a Cause of Migraine, by Dr. E. Pfaff and Dr. J. J. Putnam, of Boston; On the Toxicity of the Urine, by Dr. F. Foreheimer and Dr. R. W. Stewart, of Cincinnati; Perforation of the Stomach by a Foreign Body in an Infant Seven Weeks Old, by Dr. T. M. Rotch, of Boston; and An Experimental Study of Pancreatitis, by Dr. S. Flexner, of Baltimore.

The Greater Manhattan Obstetrical Society.—The secretary, Dr. M. Richter Bong, sends us the following report of a recent meeting, the president, Dr. M. Levator Ami, in the chair; other members in other chairs:

The paper of the evening was read by Dr. R. S. A. Brech, on "The Bacteriology of the Fetal Cord." The author announced that, after examining six thousand cords, he had found no bacteria. Sixteen thousand two hundred were examined and found four hundred and ten after birth, and the cords of short periods varying from one week to two months post partum. He concluded by saying that no previous case could ever be attributed to the cord, and he had now shown, in the only original investigation of its kind ever made, that no pathogenic germs existed in the cord at any time.

Dr. MESOBLAST JENKS, in opening the discussion, congratulated the reader on his remarkable paper. He, too, had made similar experiments many years ago and had reached the same conclusions. Might he ask Dr. Breech if he had used platinum needles in his researches?

Dr. BREECH replied that he had used aluminum needles, and a culture medium of agar-agar, gelatin-gelatin, bouillon-bouillon, beef tea, and salt, smeared with human blood and frog's serum. He had stated this in his paper in detail and was sorry that Dr. Jenks had not paid attention.

Dr. L. O. A. SMITH, of Omaha, was glad to be present and wished to congratulate the reader of the paper on his painstaking work, but he would refrain. He had had many cases of sepsis and had always attributed them to the cord and the germs clinging thereto. But, after elaborate researches done in his laboratory and published in the *North Greenland Medical Decade*, he had become convinced that the sepsis must be sought for elsewhere. He was surprised that Dr. Breech had not read his paper.

The PRESIDENT said his own researches in this direction had occupied twenty years and had recently been published in the *Medical Length*. Nevertheless, he agreed fully with the reader of the paper, but regretted to find that he was not familiar with the literature of the subject. He (the president) had used nutrient blood-vessels as culture media, and, although he had occasionally got a growth of bacteria, he attributed it to carelessness of techniques.

Dr. BREECH, in closing the discussion, was glad to see that the subject had aroused such interest, as it was a new one.

Dr. HYALINE C. DOE begged to make a preliminary report on his new treatment for eclampsia. Taking his cue from the name of the disease, he employed numerous clamps adapted in form and shape to every muscular apparatus of the body. When an eclamptic attack appeared, these clamps were applied and screwed on tight; and "where is the woman," asked Dr. Doe, "who can have a fit when every muscle is tightly clamped?" He had used these clamps in three cases and, although all the patients had died, he did not feel discouraged, for his statistics were as good as those of men who employed other treatment. An additional advantage of his apparatus lay in the fact that, after sterilization, it could be used about the house for other purposes.

Dr. BREECH thought this a very ingenious scheme, and would be glad to make use of it if he ever had a chance.

The PRESIDENT thought the measures extreme. He relied upon flushing of the kidneys and the suprarenal capsules. If necessary, he even exposed these organs and flushed them externally.

Dr. JENKS thought we were rapidly solving the question of eclampsia, and hoped to see the day when such seizures would be things of the past. He believed they were relics of barbarism and should be abolished.

Dr. FOSSA asked if any members ever used chloroform during an attack. He had read that chloroform was useful in eclampsia and had recently given a patient four ounces by the mouth and been surprised to see that her sufferings had only been increased. Only after her rather sudden death did she seem to regain her composure. In the next case, he would certainly use Dr. Doe's clamps, which were destined, he thought, to revolutionize obstetrics.

Professor MONTEREY BLENERHASSET LEAKING, the eminent teacher of Edinburgh, who was present, was invited to speak. Dr. Leaking said he was delighted with what he had heard and should return to his home to tell his colleagues of the marvelous American progress in obstetrics. Perhaps the society would be interested in his new method of treating posterior positions. Every obstetrician knew the annoyances and difficulties of these positions when they did not rotate to the front. Dr. Leaking had conceived the idea of version, not of the child, but of the mother. If, he argued, we turned the mother on her abdomen, what had formerly been a posterior position became of necessity an anterior one. The only difficulty he had experienced had been in preventing the child's head coming through the rectum. He would earnestly recommend this method to the society. He wondered that it had not been thought of before, considering its simplicity.

As Dr. Leaking took his seat the society broke into wild applause, and all the members took copious notes. Dr. Breech moved a vote of thanks to the distinguished visitor. Carried with one dissenting vote.

Dr. JAMES HYDROCEPHALUS EPIBLAST reported an interesting case, that of a primipara. Labor lasted nine hours, and the cord was wound once around the neck. The placenta was removed easily *à la Crédé*. The mother and child both recovered. He had neglected to observe the position. The interesting feature of the case lay in the fact that the father had not said: "I feel so much better now that it is over, doctor. I shall never forget you." (No discussion.)

Dr. R. ILIAC FOSSA reported a case of maternal impression in a primipara. The labor was normal in every respect, resulting in the birth of a fine healthy child. An hour after its birth the child was noticed to put its right index finger into its mouth. The mother was at once alarmed and remembered distinctly that twelve years previously she had once put her left index finger into her mouth while pondering deeply. Dr. Fossa called attention to the fact that, although the index fingers were different ones, the coincidence was most striking and confirmed his opinion, frequently expressed, that maternal impressions did undoubtedly impress.

The case recalled to the president one in his own very large and constantly increasing obstetric practice. The father of an otherwise healthy child occasionally drank as many as two glasses of beer a week while his wife was pregnant. At the child's birth it was noted that it bore a striking resemblance to a brewer who was an intimate friend of the family. The father, who drank this brewer's beer, and who was frequently away from home for several weeks at a time, had assured the president that only the close association of thought between himself and his wife could account for the remarkable coincidence. The president concluded with the sage remark: There are more things in heaven and earth than are dreamed of in our philosophy, Horatio.

The society voted that the legislature be informed that it desired the annihilation of midwives.

The meeting then adjourned for oyster soup with real oysters, thin sandwiches, water, and milk.

Koch's Lymph is now admitted into this country free of duty because it does not interfere with home consumption.—*Louisville Medical Monthly*.

The New York City Hospital.—Dr. Walter Benschel has been appointed pathologist to the hospital.

Original Communications.

WHEN TO OPERATE FOR APPENDICITIS.

NOTES ON TECHNIQS.*

By ROBERT T. MORRIS, M. D.

By "appendicitis" I mean infective, exudative appendicitis. This excludes such diseases as tuberculosis, cancer, or actinomycosis, which involve the structures of the appendix in their own specific kind of infection.

It excludes catarrhal inflammation of the mucosa of the appendix.

Tuberculosis, cancer, and actinomycosis of the appendix require operation because of their own specific nature.

Catarrhal inflammation of the mucosa of the appendix does not require operation, and it apparently does not cause symptoms which are referable to the appendix alone. It is an easy matter to make the differential diagnosis in most of these cases if one has given himself opportunities for learning.

Infective exudative appendicitis requires operation, as a rule, as soon as the diagnosis of appendicitis has been made. That is a rule that I proposed early in the present decade, and it aroused widespread adverse comments for two chief reasons: First, because some readers were not quite familiar with the meaning of the word "rule." Secondly, because some readers assumed that it was intended to cover cases that were not accurately diagnosed.

Appendicitis, according to my definition,† is an infective, exudative inflammation of the appendix vermiformis cæci, originating in any local cause for the production of an infection atrium in the tissues of the appendix, and progressing by bacterial invasion into the tissues of the appendix. The chief cause for bacterial infection from the lumen of the appendix is the formation of an infection atrium in the mucosa of the appendix. Such an infection atrium may be produced in various ways. Commonly, by twisting of the appendix by the action of the right psoas muscle; by ulcerative erosion at the site of a concretion; by ulcerative erosion due to the action of entozoa; by desquamative erosion following catarrhal inflammation of the mucosa of the appendix.

Having begun as a definite lesion, appendicitis progresses to various degrees of tissue destruction, according to the virulence of the species of bacteria that have entered the infection atrium, according to the relative value of the resistance factors of the patient, and according to the anatomy of any given appendix. The principal bacterial malefactors are the colon bacilli

and pyogenic streptococci. The principal resistance factor is leucocytosis. The principal anatomical defect is a narrow tube of muscularis and peritonæum which causes compression anæmia of infiltrated lymphoid structures.

The relative importance of these factors in any given case is always unknown, and, being unknown, the physician can only speculate as to their behavior in any case of appendicitis.

The character of their behavior is determined only by operation or by final inflammatory results. Such being the case, we are to operate as soon as the diagnosis of appendicitis has been made, in cases in which neighboring structures are exempt from infection at the time when the patient is first examined, in order to prevent infection from extending into those structures.

We are to operate as soon as the diagnosis of appendicitis has been made in cases in which widespread infection is found on first examination, in order to prevent such infection from extending still further.

We are to operate as soon as the diagnosis of appendicitis has been made in cases in which infection is subsiding when the patient is first examined, in order to avoid the surprises of sudden exacerbation, to avoid tedious convalescence, and post-infective peritoneal adhesions of troublesome character.

We are to operate as soon as the diagnosis of appendicitis has been made in cases in which all evidences of acute infection have subsided when the patient is first examined, provided that on accurate palpation we are able to determine that the appendix is the seat of chronic infection. The reason for this is because after one or more acute attacks of appendicitis have subsided we find hard concretions or entrapped fecal contents in nearly twenty per cent. of the cases. We find partial or complete mucous inclusions in more than eighty per cent. of the cases.

Some surgeons argue that early operation is desirable on the score of avoiding post-operative ventral hernias; but I do not believe in the danger of post-operative hernias after operation at any stage of infection, provided that the structures of the incised wound are properly sutured. If post-operative hernia does occur in improperly sutured wounds, such hernias offer opportunity for very pretty and successful secondary operation, provided that at the secondary operation the muscular planes are dissected apart separately and separately sutured.

The reason why we are to operate as soon as the diagnosis of appendicitis has been made is that the surgical death rate is lower than the medical death rate, if the surgical work is properly done. Another reason is because the suffering rate under proper surgical treatment is less than the suffering rate under medical treatment.*

Another reason is because the loss of time rate for the

* Read before the Society of Alumni of Bellevue Hospital, March 1, 1899.

† See *Lectures on Appendicitis*, third edition.

* See testimony of patients. *Lectures on Appendicitis*, third edition.

patient under proper surgical treatment is less than the loss-of-time rate under medical treatment.

In connection with this presentation of the subject of appendicitis I wish to make a brief report upon the results of certain kinds of operative technics in a class of cases that are commonly thought to be of the most fatal type. It is now a well-known fact that the operative death-rate in appendicitis is less than one per cent. at the hands of several surgeons in cases in which infection is practically limited to the tissues of the appendix at the time of operation, no matter whether these are primary infection cases or post-inflammatory cases with extensive adhesions. It is not commonly understood that the death-rate may be made small in the class of cases in which infection is widespread at the time of operation. The list of cases here presented consists of seventy-six consecutive cases of the class in which infection had gone on to abscess formation or to liquefaction of plastic lymph. I do not know how else to describe the type of infection in which bacteria are causing such an infection of the peritonæum that plastic lymph fails to coagulate or is liquefied after coagulation.

The list includes cases of the most desperate kinds of infection that are seen by the surgeon who is engaged in abdominal work. And yet in the whole series there were but eight deaths, and there is but one post-operative ventral hernia, so far as I am aware. My means for being informed consist in a request to patients and their physicians to report upon all post-operative complications, and all of these patients were of the private-patient class, and under the charge of physicians. Not all patients report, but I believe that hardly any hernias follow the method of accurate closure of the abdominal wall, leaving only a small wick-drain opening in cases where drainage is really necessary.

In these seventy-six cases the patients were operated upon after I had dropped out of my operative technics certain methods which I believe to have a special death-rate of their own, and which are in common employment to-day.

Before I had learned to discard the methods that are in common use, my death-rate in the class of appendicitis cases with widespread infection was discouraging.

Resources which I believe have a special death-rate of their own are here enumerated in the order of their injuriousness. First comes iodoform-gauze packing. This is harmful in two ways. The peritonæum absorbs iodoform with such rapidity that toxic effects are produced in some patients from very small quantities. If we examine the urine of patients who are thought to be dying from septicaemia or exhaustion, and who have iodoform gauze in the peritoneal cavity, the result will surprise those of us who have not made such examinations. A little urine stirred up with a pinch of calomel in a saucer will show the brownish reaction, as iodide of mercury is formed in cases in which the urine contains free iodine. A peculiarity in these cases of death from

iodoform poisoning is the good appearance of the wound.

Gauze packing alone is probably next to iodoform-gauze packing in order of injurious resources which have a special death-rate of their own. Strong and well men can not bear in the abdominal cavity the presence of a yard of gauze, and I do not know why a weak and exhausted patient should be asked to bear what can not be borne by a strong man. Aside from the shock caused by gauze packing, the gauze causes excessive lymph exudation, and this lymph then forms a large culture medium for bacteria, or it forms strong, troublesome adhesions of viscera. Further, when gauze packing is removed it causes so much distress that surgeons sometimes anæsthetize the patient when the dressing is made. Gauze packing often causes post-operative obstruction and ileus by its mechanical effect. It is almost as harmful in this respect as strips of gauze carried to various points among viscera for drainage, but the gauze strips have one special death-rate of their own when peristalsis causes them to encircle loops of bowel.

Lastly, it is impossible to guard well against the development of post-operative ventral hernia in any case in which gauze packing or multiple gauze strips have been employed. Gauze packing and gauze strips are not only harmful but they are unnecessary, and they can be replaced by a small narrow drainage wick covered with gutta-percha tissue to avoid adhesion formation. The narrow wick allows the wound to be closely and accurately sutured. It must be managed with a knowledge of the mechanical principles involved in dealing with capillarity.

A method which must have a special death-rate of its own consists in leaving infected appendices among adhesions. Such appendices are frequently gangrenous in part and they often contain concretions. The necessity for leaving such appendices among adhesions disappears almost completely after one is sufficiently trained in adhesion work.

The plan of making long incisions and of partial evisceration of the patient under the imagined necessity for cleansing pus and lymph from loops of bowel is a dreadful method, and one which is not based upon our knowledge of the fact that leucocytosis and lymphatic circulation will do the work much better than the surgeon can do it, provided that the surgeon possesses modern knowledge of the subject of leucocytosis and of peritoneal lymphatics. I object to having evisceration methods presented to surgeons who are so bold as to think well of the proposition. If we remove the chief pus collections rapidly with hydrogen dioxide, followed by saline solution, and if we carefully avoid handling or even seeing loops of bowel, we are doing what is best, if my statistics are of any account in the way of testimony. In these cases of advanced septic infection of the peritonæum, I believe it to be the duty of the surgeon to get in quickly, to get out quickly, and to be gentle. It

is wonderful to see how well badly infected patients respond to treatment of the gentler sort, and how quickly they take the favorable turn if we do not hold them down with gauze, with iodoform, or with morphine.

A method which may not have a death-rate of its own, but which certainly causes delay in operative work, consists in carefully walling off an abscess cavity with gauze arranged to protect the peritoneum. This requires a rather large incision, and it requires the expenditure of time. It is based upon conventional ideas of cleanliness rather than upon a knowledge of leucocytosis. I find it much better to work rapidly in separating adhesions, and to allow pus to flow as fast and as freely as it will anywhere over the peritoneum, allowing it to follow the lines of least resistance, and blowing it out with hydrogen dioxide from time to time as the work proceeds.

During the time covered by the seventy-six cases in the subjoined report, I operated in every acute case of appendicitis that I saw, with the exception of those of one patient who had a dilated heart with advanced cardiac complications, and two patients who died just before I got to them. In patients who were nearly moribund at the time of operation a strychnine pulse was obtained before operation was begun, and codeine was administered hypodermically to lessen the disturbance caused by anæsthetics. During the time covered by the cases in this report I operated in a much larger number of cases in which the appendix was perforated, or gangrenous in part, but infection had not gone on to the point of abscess formation or to liquefaction of lymph. There were no deaths at all in this class of cases.

My seventy-six cases of the most dangerous class are grouped according to a kind of loose classification.

General Suppurative Peritonitis.—Three cases. Three appendices removed. Two patients recovered. The one who died had a fluttering pulse of about 160 and gasping respiration when I operated. He improved after operation for a few hours and died in one of several "sinking spells." One who recovered has a ventral hernia, the only hernia in the list, so far as I am aware. The other patient who recovered has a fecal fistula due to sloughing of patches of colon. This is the only unclosed fecal fistula in the list.

Septic Peritonitis of Various Degrees with Liquefied Lymph in Place of Abscess Formation.—Fifteen cases. Fourteen appendices removed. Fourteen patients recovered. The patient who died was lost through post-operative intestinal obstruction. He was far from New York, and I could not apply resources which have been successful in relieving post-operative intestinal obstruction in cases under the care of my assistants and nurse.

Multiple Acute Abscesses.—Fourteen cases. Twelve appendices removed. Four patients died. One who died had the entire peritoneal cavity apparently filled with small encapsulated abscesses. I opened eight or ten and saw that the patient was dying while I was at work

He died two hours later. Another who died had a large pelvic abscess, which I overlooked because it was in the pelvis and distant from the abscess which was opened.

Another who died seemed to die actually from exhaustion. I do not like the word "exhaustion," because it is usually employed when one feels cowardly about facing the word "septicæmia." In this case the patient had managed enormous business complications for more than a day after the development of a large abdominal abscess, and with a rapid, feeble pulse. After the operation there was no extension of infection, apparently, but Nature made no attempt at repair. The patient simply failed from inanition. He seemed to have exhausted all his reserve strength before the operation.

The fourth patient who died was lost from post-operative intestinal obstruction. This patient was also far from the city and out of reach of the resources that would have been applied in a hospital.

Single Acute Abscesses.—Thirty-three cases. Thirty appendices removed. Thirty-one patients recovered. One who died was lost because the abscess opened into the ureter before operation, and he died from suppurative nephritis. The other patient who died was a feeble child who had carried a large abdominal abscess for several days, and who was so exhausted at the time of operation that he could not carry on repair.

Old Abscesses.—Twelve cases in which acute symptoms had subsided and the patients were walking about, some of them with large multiple abscesses. Twelve appendices removed. All the patients recovered.

THE TECHNIQUE OF THE BOTTINI OPERATION.

By RAMON GUITÉRAS, M.D.

ONE of the most important operations that has come into the field of surgery during the last few years is the procedure for reducing the impediment in cases of hypertrophy of the prostate gland, and thus allowing the bladder to once more empty itself.

This operation was devised by Bottini, of Pavia, in 1872, but did not receive much favor until about a year ago, when it was taken up by Freudenberg, of Berlin, who modified the instrument used in performing it until it has reached its present state of perfection.

The instant that the benefit derived by this means was made generally known, it created a *furore* among the genito-urinary surgeons, which has never been equaled by any operation in the past.

Notwithstanding the fact that most elaborate articles have been written upon the subject by Freudenberg, Meyer, Viertel, Lohmstein, Morton, Hure, Lewis, and others, it does not seem as yet to be fairly understood by the majority of practitioners as it should be, when we consider that it is an operation which any one can per-

form who is familiar with the anatomy of the genitourinary organs in health and disease.

It is therefore my object to try to describe in detail how this important operation should be performed, in order that any of my readers who find it necessary may be able to make use of it without fear of making any serious blunder. I shall also endeavor to describe briefly what the degree of prostatic hypertrophy is which would lead us to perform it, and what steps should be taken in after-treatment in ordinary cases and when complications occur.

Let us then consider what the prostate gland is in health, and later how it is affected by age and disease.

The prostate gland is an organ shaped like a truncated cone, flattened in front and behind, or, in other words, shaped like a horse-chestnut, which surrounds the neck of the bladder and the beginning of the urethra. Its base is the part in contact with the former, and its apex that which is contiguous with the latter. It is about an inch and a half wide, an inch and a quarter deep, and three quarters of an inch in thickness. It is composed of three lobes: two lateral ones which meet in front and behind, and a middle one situated between them posteriorly under the floor of the urethra, which does not manifest itself until the patient is pretty well advanced in years. This third or middle portion is not strictly speaking a lobe, but consists of hypertrophied tissue situated in the space behind the upper end of the urethra and the neck of the bladder, where the two lateral lobes diverge, which presses up the urethra at its vesical orifice, thus rendering it impossible to empty the viscus completely.

In structure the prostate gland is made up principally of muscular and glandular tissue, the glands resembling racemose glands. They occur in lobules, forty or fifty in number, and their ducts open into the floor of the urethra in twenty or more places. The muscular fibres are found along and around the urethra, and radiate from it. They are mixed with fibrous and elastic tissue and support the glandular elements forming the stroma. The gland is incased in its capsula propria, which can be separated from it only with great difficulty. External to this is a second capsule, which is continuous with the deep perineal fascia at its apex. Between these two capsules is the prostatic plexus.

The prostate is situated between the rectum and the symphysis pubis, lying immediately in front of the former and about three quarters of an inch behind and below the latter. It is also an inch and a half from the anus.

The function of the prostate is to secrete a milky fluid containing molecular matter, squamous and columnar epithelium, and granular nuclei.

The usual way of examining a prostate is by the rectum, the gland being found an inch and a half from the anus anteriorly, where its size, consistence, and outline can be noted.

Hypertrophy of this gland rarely occurs before the forty-fifth year, and generally after the fiftieth, although troublesome hypertrophy is not found in more than eight or nine per cent. of old men. In these enlargements the fibrous and muscular elements seem to take more part than the glandular, and tend to arrange themselves into distinct nodules of a spherical form. These growths tend to protrude where the resistance is least—that is, on the urethral aspect. They are found to bulge, especially in the floor and sides of the urethrovessical orifice, forming the so-called enlarged middle lobe. They may reach the size of an orange and even larger.

As the prostate hypertrophies, the orifice of the urethra becomes elevated, and the return flow of blood from the vesical veins is impeded by pressure upon the prostatic plexus. This results in imperfect evacuation of the bladder, and consequently in residual urine. Cystitis develops, as is evidenced by a frequent desire to urinate (due to irritation of the neck of the bladder from venous congestion) and the other symptoms usually present.

If the hypertrophy continues, these symptoms increase or are replaced by graver ones, and we have dilatation of the bladder, hypertrophy of the muscular and fibrous coats, and the formation of diverticula; dilatation of the ureters and pelvis of the kidney, congestion and catarrhal inflammation of the entire urinary tract, with an accumulation of the urinary and inflammatory products, and perhaps septic inflammation extending from the bladder to the kidney (pyelonephritis), resulting in chronic uræmia and death.

Thus we see what conditions must be relieved in order to benefit our patient. His general health should be improved; his bowels regulated, and his skin kept active by warm baths; his clothing should be warm, to prevent taking cold, and he should eat moderately and drink plenty of water. His urine should be kept in the best possible condition by the use of internal urinary antiseptics, as the benzoates, the salicylates, boric acid, etc. *Ol. gaultheriæ*, *eucalyptus*, and *urotropin* are also of great service. Locally, his bladder should be emptied by catheter twice a day and washed out with a boric-acid solution, other antiseptic solutions, as permanganate of potassium, nitrate of silver, and borolyptol, being used at intervals.

When the patient has been brought into the best possible condition generally and locally, an operative procedure can be considered. Ligation of the internal iliacs, resection of the vas deferens, castration, prosta-tectomy, and the formation of a perineal fistula have all had their day and advocates, and the mass of practitioners seem now to be coming to the opinion that the operation by the Bottini galvano-caustic incisor is the quickest, the simplest, and the best.

The change in the size of the prostate is noted by rectal and urethral examination.

When a patient over fifty years of age presents himself, suffering from the symptoms already described, it is natural to suspect prostatic trouble, and after he has voided his urine we examine him with a catheter to see if he has any residual urine or any prostatic impediment. The catheter first used should be straight, of soft rubber, and velvet-eyed, about the size that will easily glide through the canal.

This should be passed in slowly and gently. If at six and a half or seven inches from the meatus it comes against a barrier, it will probably be found to be the hypertrophied middle lobe, and the urethral floor will be found to be raised at this point. An elbowed catheter (Mercier) of the same size and material should then be tried, and, if this will not pass, smaller ones should be used until one has been made to ride over the prostatic hillock into the bladder. The sensation of riding over this elevation is well known to one familiar with the feeling of the prostatic urethra in cases of hypertrophy. A straight catheter of the same size as the *coudé* can not usually be made to pass. The amount of residual urine in the bladder and its condition should then be noted, and the distance (measuring from its eye) to which the catheter has to be passed, in order to draw urine, should also be observed, as it shows the length of the urethra in the case. Ordinarily, eight inches of an instrument, reckoning from the eye, is sufficient, and if it is necessary to introduce one further, the extra distance to which it has to be passed will indicate the increased length of the urethra—that is, of its prostatic portion. This gives us some idea of the length of the prostate and the extent of the hypertrophy in its long diameter.

The rectal examination shows the increase in size in most cases, although there is no rule regarding this. We often observe prostates that seem to be as large as an orange by rectal feel in cases where there is very little urethral obstruction noticed by the catheter, and in which there is very little residual urine present; while, on the other hand, we may notice by rectal examination a small, hard prostate which does not seem to be as large as normal, and yet, when an instrument is passed by the urethra, a marked impediment is noticed, and a large amount of residual urine is found to be present. Such a condition is accounted for by the middle lobe growing up into the urethra, and not down and backward, so as to be easily noticed as a protrusion in the rectum. In a prostate that feels large on rectal palpation the lateral lobes are usually the part principally involved.

In examining the prostate by the rectum, the forefinger of the physician is the one generally employed, and the length of the digit as compared with the prostatic landmarks in health and disease should be taken into consideration.

The part of the rectum explored in our prostatic investigations is the anterior wall from the anus to the base of the prostate. This surface lies at an angle, more

or less obtuse, with the apex of the prostate corresponding to that of the angle; for the first part of the rectum extends upward and forward from the anus to the apex of the prostate, while from this point the direction is rather upward and backward. The forefinger from tip to base—that is, to the web—is from three inches to three inches and a half in length; the first part of the rectum is an inch and a half long, and the prostate is an inch and a quarter, which would make a distance of two inches and three quarters from the anus to the base of the gland, if one were to follow the angle that I have spoken of; but, of course, going in a straight line to the base shortens this somewhat. If the distance to the base of the gland were not shortened in this way, the man with a forefinger three inches in length would not be able to feel the base of the prostate in a case with over a quarter of an inch of hypertrophy, and he would not be able to explore the region of the bladder trigone or seminal vesicles at all. This is not the case, however, and some of the surgeons with short fingers are most skillful diagnosticians. In my own case, I have a forefinger three inches and a half long, and I have never seen a case of prostatic hypertrophy where I could not feel over the edge of its base per rectum. I have frequently, however, examined cases of enlargement of the gland where my colleagues present at the time could not feel over its base.

Some authors hold that there are a number of different forms of prostatic hypertrophy, but that the principal ones are the glandular and fibromuscular. They claim that in the former the hypertrophy consists principally of glandular elements, in which case we have the large succulent prostate, and that in the latter the muscular and fibrous tissues are principally involved, in which case the enlargement is not so marked, but the tumor is exceptionally hard and resisting. These observers also hold that the first group is suitable for enucleation, while the second is better for the Bottini operation.

In answer to this I would say that I have performed the Bottini operation on one of the first variety as large as an orange, in which case permission for an operation by enucleation could not be obtained, and I have failed to enucleate one of the typical, indurated, connective-tissue hyperplasias (the fibromuscular). I am watching the former case with much interest. His prostate was two inches long from base to apex, and I made the maximum incision in it posteriorly—that is, one-fourth of a centimetre long.

As we have now completed the review of the prostate in health and hypertrophy, let us take up the important part—namely, that of the operation, and describe somewhat at length the instrument, the apparatus connected with it, and the way it should be used.

The incisor is an instrument whose scabbles closely a Thompson lithotrite in its shape and formation, the great difference being that the incisor blade of the litho-

trite is replaced by a thin, dull blade, which is connected with a battery and acts as a cautery knife. It is worked by a wheel attached to a screw in the handle, as is a lithotrite, while the outside shaft, or female blade, is kept cool by a stream of water constantly passing through it. The difference in the working of the two instruments is that the lithotrite is first opened, and, after grasping the stone, is closed, the male blade being pushed forward toward the female, while in the incisor the beak is caught behind the prostate while closed and then opened, the male blade being drawn backward away from the female. My object in this preface is to compare the instrument under consideration with one that has been for a long time familiar to the eye of the physician, in order that he may have a better idea of its general appearance. In describing it individually, I will say that the incisor, taken as a whole, is an instrument sixteen inches and a half long, and consists of a shank shaped like a sound, eleven inches long; a rounded cylindrical handle on the proximal end, three inches long; and beyond this a straight pivot for the attachment of the electrical cable contact; a wheel working the Archimedeian screw in the handle of the instrument, which draws back the cauterizing blade and the centimetre scale on its proximal side. From the tip of the instrument up into the handle on its upper or concave surface is a slot, through or along which the female cautery blade passes.



FIG. 1

The instrument is made up of two distinct pieces, one fitting into the other—that is, a shaft within a shaft. The outside piece, from the beginning of the handle *Gr* to the end of the instrument, is the female blade. It is a sleeve with a slot running through it composed of the soundlike shank *F* and the expanded handle *Gr*. The handle has around it on the inside a thread into which the screw thread of the male part fits. The remainder of this female part is hollow, so that water may run through it, and there are two nozzles, *K*, extending down obliquely from the handle on either side, which serve as water pipes to which the tubing is attached, one leading up to a reservoir on the wall, the other down to a receiver on the floor. The water from the reservoir

flows down the first piece of tubing through the instrument and then down through the other piece into the pail or receiver on the floor. This is called the cooling apparatus, applying especially to the hollow part of the instrument with its connections. The inside piece from the pivot *C* to the end *Pl* is the male blade. This latter, consisting of a shaft with its blade *Pl*, screw thread, centimetre scale *Sc*, and pivot *C*, can be entirely withdrawn from the female shaft, washed, cleaned, disinfected, and put back again. The screw that slides the male blade backward and forward in the female slot is entirely hidden from sight in the handle, as is the centimetre scale, when the instrument is closed—that is, when the shaft of the male blade is hidden from sight in the female.

The cable contact *P* is a cylinder into which the electrical cable *L* is inserted, the other end of which fits over the pivot *C* of the instrument.

The next important consideration is the battery. This is exceedingly bulky, and, although called light, weighs over eighty pounds. It is about eighteen inches high and ten inches wide. When the battery is closed, two dials can be seen on the front of the box, one semilunar in shape, with three fingers upon it and an indicator; the other, below, round, with fifty figures upon it, each representing an ampère, and a revolving hand to point out the number indicating the strength of the current used.

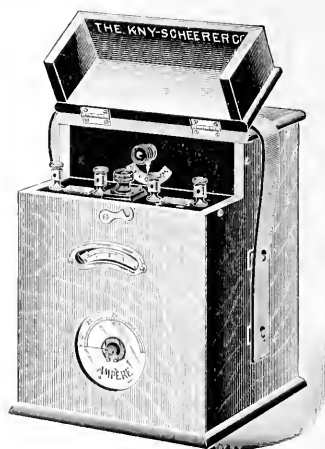


FIG. 2.

The upper segment of the front of the box (battery) can be lifted up, disclosing the screws and switches for turning on the current.

The two binding posts marked "use" on the left are connected with the two cable terminals; the two posts on the right are to connect with the attachment cords from the mains for charging the battery. Between the two sets of posts is a black screw with an arrow beside it to show which way it should be turned in order to

turn on the current. On the upper and back part is a switch with a tongue pointing down to 0 (zero), meaning that neither of the two cells of the battery is connected. By moving the tongue to the left (No. 1) one cell, and by moving it to the right (No. 2) two cells are turned on.

Directions for Using the Battery.—"Connect the two cable terminals with the two binding posts on the left-hand side marked 'use.' Throw in two cells by turning the tongue of the switch to No. 2. Turn on the current by twisting the black screw situated between the four binding posts to the right, when the needle of the ampèremeter will soon show the strength of the current. For the operation a current is needed sufficient to heat the cautery knife to a red glow, generally from forty to forty-five ampères."

Note.—Precaution should be taken to have the male terminal of the instrument entirely introduced into the female terminal of the cable.



FIG. 3.

Rule for Charging the Battery.—"To charge this battery, connect it with the current from some main, using a strength of seven ampères and a half for eight hours. It is advisable to send it to some electric-light plant for this purpose. If the current is indirect, this is done by means of a transformer; but if direct, a motor is used in addition to the transformer.

If the operation is done in an institution where there are electric lights, it is much better to make use of the street current, as then it is not necessary to carry about the heavy battery, and one is sure of sufficient electricity for any number of operations.

If the current is indirect, it is simply necessary to make use of a transformer to reduce the 104-volt current of the street to four volts.

If the current is direct, a motor must be used in addition to the transformer to reduce the current to the strength desired.

"In using the transformer, the current from the street mains is led into the primary coil by connecting the attachment cords from the two binding posts on the

right of the instrument (transformer), after first threading the ends of the cords through the diagonal holes in the wood base at that end. The secondary coil is wound on the movable spool. It is operated by a

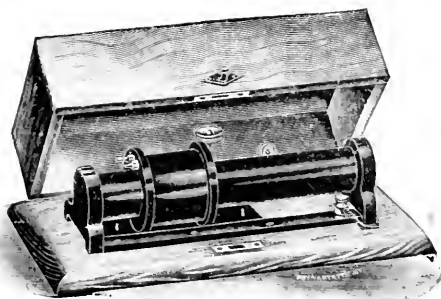


FIG. 4.

ratchet device, and the terminals are brought out of two pin or locket attachments mounted on one head of the coil to which the cautery cord can be attached. By moving the coil to the right the current is increased, and vice versa.

"The apparatus is fitted with a switch at the back which automatically cuts off the current from the mains when the cover is closed. The connection of the transformer with the ampèremeter and incisor is accomplished as follows: Connect one end of a short cable of about one yard in length with the one socket on the movable spool of the transformer, the other end with the binding post A of the ampèremeter. One terminal of the heavy cable furnished with the incisor is then connected with the binding post B of the ampèremeter, while the other terminal of the incisor cable is connected with the free socket on the transformer spool.

"In this way the current travels from the mains into the transformer, thence through the ampèremeter into the incisor, and then back into the transformer, thus closing the circuit.

"Should there be a sudden interruption of the current, look to the porcelain plug, which is easily taken apart, as a safety fuse of lead wire may be burned out, which is easily replaced by the surplus fuse wire furnished with each transformer.

"The transformer and the portable ampèremeter are very light and can be carried about with ease. The dial of the ampèremeter shows the number of ampères being used, the same as the dial on the face of the battery."

The anatomy of the parts in health and the particular disease, together with the instrument and apparatus,

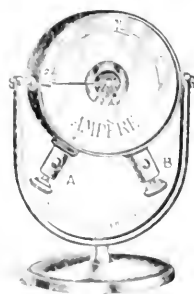


FIG. 5.

having been thoroughly explained, it only remains to be shown how one works upon the other at the time of the operation. The entire apparatus should be arranged and tested before the operation, in order that everything may run smoothly when once it has begun.

The reservoir containing the cold water should be hung on the wall on the side corresponding to the patient's left. The tubing coming from this should be attached to the water pipe on one side of the handle of the instrument, and another piece of tubing should be attached to the other pipe, and from there extend to some vessel on the floor. The instrument should then be held over the middle of the table in the position corresponding to the one in which the patient is about to be placed, and water should be allowed to run through it to see if it makes the circuit from the reservoir to the receptacle through the tubing and instrument without being impeded in its course. The battery is then placed upon a high stool or table on the left of the patient in a position where the dial can be seen and where the screw for turning on the current can be easily reached, if necessary, during the operation by the operator from his position at the foot of the table. The cable should be attached to the posts of the battery, and the pivot on the end of the handle of the instrument. The tongue of the switch on the back of the battery should be turned to Fig. 2, thus throwing in two cells. Connection should be made by turning the contact screw on the cable contact. The black screw on the top of the battery should be twisted to the right, thus turning on the current until the blade of the instrument has been turned to a cherry red, when the number of ampères indicated by the hand of the ampèremeter should be noted. The instrument can then be said to be ready, and the current having been turned off and the cells thrown out again, it should be placed beside the battery, when it will only remain to put the patient in readiness for the operation.

The relation of this preparatory drill may seem to be unnecessary to the reader, but he will find out, if he sees many operations performed, that it is of vital importance.

The patient is placed upon the table at full length on his back, and the final preparations for the operation are entered into—that is, the washing out of the bladder and the anæsthetizing of the part.

A *coudé* (elbowed) soft-rubber catheter lubricated with glycerin, having been passed into the bladder, the urine is drawn off, and the bladder washed out with a boric-acid solution by means of a large Uitzman or Guyon hand-syringe, until it comes away clear. When the bladder is clean and empty, an ordinary urethral hand syringe is filled with a four per cent. solution of eucaïne, which is injected through the same catheter, and, while it is being thrown in, the catheter should be slowly withdrawn, thus allowing the solution to come in contact with all parts of the neck of the bladder and

the deep urethra. A syringe of the solution should also be thrown into the anterior urethra and held there for a few seconds.

From this moment the work should be done quickly and accurately, and I have observed that the quicker the operation is performed after this injection of the anæsthetic the less painful it is to the patient.

If cystoscopy is now performed, the time required for it will usually be sufficient to allow the effect of the anæsthetic to wear off before the actual operation is performed, and for this reason I think it advisable either to use the cystoscope at an earlier date or to again inject an anæsthetic after cystoscopy. Again, cystoscopy is often more painful than the operation itself. It seems to me for this reason that it is advisable to omit the question of cystoscopy at this stage and consider it as having been performed previously when the patient was examined.

Therefore, after the eucaïne solution has been injected into a clear and empty urethra and bladder, the catheter should be quickly introduced again and six ounces of boric-acid solution injected into it by the large syringe.

The catheter should then be withdrawn and the incisor inserted. This often catches in the prostatic urethra. In this case the handle of the instrument should be pressed down so that the end may be pushed up over the prostate and through the upper part of the vesical orifice. If it does not enter immediately, a sand bag or pillow should be placed under the patient's hips, after which the instrument can usually be pushed in without further difficulty. If it can not, however, there are only two things to be done: one is to anæsthetize the patient and thus relieve the spasmodic contraction of the neck of the bladder, and the other is to give up the operation. If an anæsthetic has to be given, I prefer laughing gas, as the patient is quickly put under its influence and comes out from under it almost immediately after the operation is finished. In four cases I have not been able to enter the bladder, and yet I have felt the beak of the instrument in the prostatic urethra through the rectum. In three of these cases I was obliged to desist after trying for about ten minutes in each one to make it enter. In each one of these cases I afterward went in almost immediately when the patient was under the influence of the gas. In the fourth case I was obliged to desist on account of not having an anæsthetic, and afterward did not have another opportunity of performing the operation. With the patient under the influence of nitrous-oxide gas there is practically no danger of death from anæsthesia, and the patient is perfectly quiet and does not tend to pull away, as he often does when not anæsthetized. The small cylinder put up in a portable case by the White Dental Company is light, inexpensive, and contains about enough gas for three operations, thus well accompanying the Kny-Scheerer battery, which in its turn contains just about enough electricity for three operations.

After the instrument is in the bladder, the forefinger of the left hand should be inserted into the rectum and its tip hooked over the base of the prostate in the median line. The handle of the instrument in the other hand

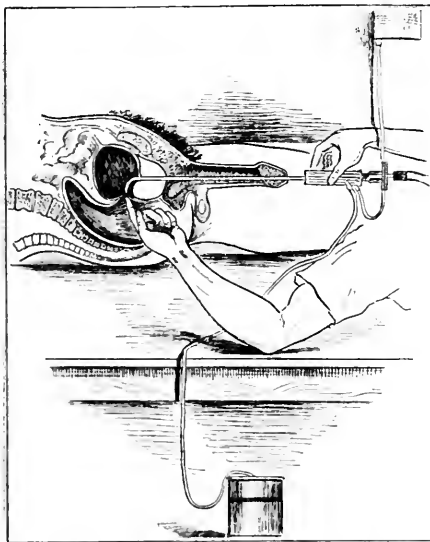


FIG. 6.—The instrument in position for cutting as indicated by the finger in the rectum.

should then be turned until the beak is looking downward, when it should be drawn forward until it catches behind the prostate. Here it can usually be felt by the tip of the forefinger in the rectum, which is hooked over the base of the gland, as in Fig. 6.

It does not seem to me, however, that the margin of the base of the prostate, as felt per rectum, is a sure guide to its edge in the bladder, as I think that the middle lobe frequently extends back farther in the bladder than it does in the rectum. I therefore am of the opinion that it is only necessary to hook it behind the middle lobe in the bladder, and to make the end of the instrument exactly correspond to the end of the rectal finger pressing up the margin of the base of the prostate.

At this point of the introduction of the finger in the rectum it is often necessary to draw up the thighs until they form an obtuse angle with the body as, when they are extended, there is a tendency to press them together, which seriously interferes with the rectal touch. In one of my first operations I was so anxious to have the point of the instrument in the bladder exactly correspond to the rectal margin of the base of the gland that in pulling it forward until they touched I was conscious that the end of my instrument was riding over something before it was exactly over the end of my finger. The result of this operation was that, although the pa-

tient could pass more urine than before, he still had considerable impediment. I think that in this case the prostate extended farther back in the bladder than in the rectum, and that the sensation of riding over something with the end of the instrument that I experienced really consisted in drawing it forward over the vesical edge of the base of the gland, and thus making my cautery incision from a point in front of the beginning of the obstruction, which, of course, left a dam behind it over which much of the urine could not pass. It would therefore seem that the rectal finger is more useful as an approximate than as an absolute guide.

To go back again to the point where the beak of the instrument was caught behind the middle lobe of the prostate. At this stage the finger of the left hand is withdrawn from the rectum, and the same hand grasps the handle of the instrument with the knuckles up. The elbow of the left arm rests upon the table between the legs of the patient, and the fingers of the right hand grasp the wheel of the Archimedeian screw at the end of the instrument, as in Fig. 7.

Note.—The handle of the instrument in this figure should be raised higher, so that the beak will sink down behind the prostate and thus cut through more tissue. The prostate in this figure is much exaggerated in size.

The operator glances about him to see that the water is running through the cooling apparatus; that the pipes are in a corresponding position on either side, thus showing that the beak is exactly behind the middle of the prostate; that the connection is made; that both cells have been thrown in, and that the cable contact fits well up on the pivot of the instrument. He then instructs the assistant to turn the black screw on the top of the

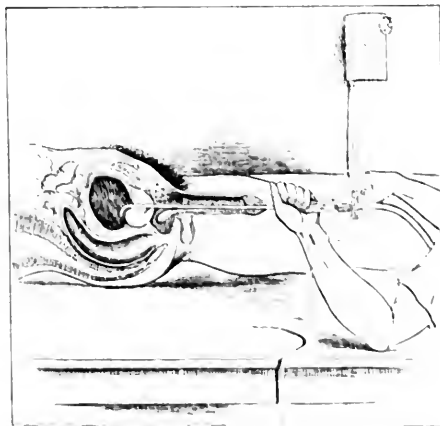


FIG. 7.—Cutting through the prostate.

battery in the direction indicated by the arrow. When this has been turned until the swinging hand on the amperemeter indicates forty amperes, it is probable that the blade has been heated sufficiently to begin; so, after

waiting a few seconds to make sure, the operator begins to turn the wheel of the instrument slowly, holding it steadily and watching the number of centimetres appearing on the scale, which indicate the length of the incision that is being made. This incision is usually about three to 3.5 centimetres (an inch and a quarter) long. The blade is then slowly glided back again by turning the screw in the opposite direction. The time required to make this incision is usually from a minute and a half to two minutes. The assistant then quickly reverses the black screw until the hand of the ampèremeter has swung back to zero (0) again. There is no need of doing this, however, as, by just unscrewing the contact screw on the cable attachment, the current can be broken and the hand will swing back to zero (0). There is, however, danger of injuring the knife in this way.

The beak of the instrument is then turned at right angles and caught in behind the posterior margin of the larger lateral lobe, and the screw is again turned by the assistant until the ampèremeter shows the number of ampères required, when the wheel of the instrument is turned until an incision of the desired length has been made, when it is again reversed and screwed back into place. The length of this incision is usually 2.5 to three centimetres, and the time spent in making it a minute and a half. The next incision is either through the roof of the prostate or the other lateral lobe. If through the other lateral lobe, the incision would be slightly shorter and requires just a little less time than the other. If through the roof of the prostate, the length of the cut would be about two centimetres, and the time required from a minute to a minute and a quarter. In making my incisions I generally follow the rules of those who have operated most frequently on these cases—that is, of making a posterior incision, an anterior one, and one through the larger of the lateral lobes, although in four cases I have simply made a posterior and two lateral incisions. It will be extremely interesting to me to know which of these two groups gives the best results. In another case I simply made a posterior incision. My reason for not making more incisions in this last patient was because my battery gave out, as I did not then know that it could not be used more than two or three times without being recharged. Care must be taken while doing this operation not to allow the patient to pull away from the instrument, but to always hold it in the same relation to him throughout the entire procedure. Naturally, if the elbow is kept firmly in place on the table, and the patient pulls back, as he often does, the instrument might be pulled away from the point where the cutting should be done and the incision might be made through the tissues which should not have been interfered with. If, then, the patient pulls away, the hand guiding the instrument should follow him in such a way that the instrument always remains in the same position. In one case operated upon, in which the pa-

tient's pelvis was elevated on a sand bag, he suddenly pulled away, allowing the concavity of the end of the instrument to ride over the convexity of the middle lobe, with the result that the heated blade that had already cut through the middle lobe, and was about to be pushed back, burned its way down through the floor of the membranous urethra into the perineal tissue. Accidents of this kind are liable to happen to any one, especially during the first operations, and should always be reported, as through them the surgeon learns what may happen, and it puts him as well as his readers on guard against such an accident occurring again.

Immediately after the operation the patient may be allowed to pass water, if he desires, and he should be put to bed. Patients are generally able to walk from the table to their beds, although it is safer to carry them.

The internal treatment consists in urinary antiseptics, diluents, and antispasmodics, if necessary.

As a diluent, water taken in large quantities is usually sufficient. If it is found, however, that the patient will not drink much, and that the amount of urine passed is below normal, its flow should be further stimulated by a mild diuretic, and for this purpose I am in the habit of giving a mixture of twenty grains of acetate of potassium, twenty minims of sweet spirits of nitre, in peppermint water, three times a day in a glass of water. As a urinary antiseptic, I generally give salol in ten-grain doses three times a day, or urotropin in the same strength, the latter preferably when the urine is foul and ammoniacal. Benzoate of sodium and benzoic acid in fifteen-grain doses are also of service.

The antispasmodics are codeine, morphine, and belladonna. These are given for frequency, pain, tenesmus, or burning. They may be prescribed singly or combined, and afford the patient a great deal of relief. Codeine may be given alone or in combination with belladonna, and perhaps benzoate of sodium. Morphine I rarely use, and then only for pain. It is very efficacious in combination with the extract of belladonna, a quarter of a grain each, in suppositories at night, in cases where there is a great deal of frequency, pain, burning, and tenesmus. The diet should be liquid for the first few days, then semisolid (soft), and full diet at the end of the week, if the patient has no rise of temperature and is feeling well.

If retention of urine occurs, as it frequently does, a catheter should be passed into the bladder and allowed to remain for from twenty-four to forty-eight hours. On withdrawing the catheter, if the patient is still unable to pass much urine, he should be catheterized regularly until the sloughs have been passed, when, if he is still unable to urinate, a second operation should be performed. If the patient has complete retention and nothing can be passed into his bladder, he should either be aspirated suprapubically or a perineal section performed.

If there is much hemorrhage, it can usually be

stopped by a hot irrigation, and, if not, a perineal section should be performed, after which a thick-walled perineal tube can be inserted into the bladder, around which gauze can be packed, thus making pressure between the sides of the tube and the cut posterior urethra.

The bowels should be moved by salines on the second day, after which they should be kept open for some days.

An elevation of temperature usually takes place on the night after operation or on the following day, rising from 100° to 105° F. This generally goes down to normal after the bowels have been moved, but I have seen cases with a temperature of from 99° to 102° for some weeks after the operation. In such a case the fever usually disappears after the sloughs have been thrown off.

Where the bladder and the kidneys are very much involved a continuous temperature may indicate a disease of the latter organs, which should then be treated accordingly. Extravasation of urine and perineal abscess might occur, but it is improbable, as the tissues are practically seared and sealed by the burning process.

To review the steps of the operation without comments and suggestions:

The instruments and apparatus required for the operation are: A soft-rubber elbowed catheter, a large hard-rubber hand syringe, and a small urethral hand syringe; a scalpel; a Bottini incisor; a fountain syringe and two pieces of tubing, one leading from the bag to the instrument, the other from the instrument to the receptacle on the floor; a galvano-cautery battery, or a transformer with a portable ampèremeter; glycerin, solution of eucaine (four per cent.), saturated solution of boric acid, and a cylinder of laughing gas.

Steps of the Operation.—The patient should be placed on his back on the table, the bowel having been washed out. The fountain syringe should be hung on the wall to the patient's left, connected with the incisor. The battery should be placed on a stool on the left of the patient and within reach of the operator. Pass a catheter lubricated with glycerin into the bladder and wash it out by means of a large rubber syringe until clean. Inject a eucaine solution (four per cent.) into the neck of the bladder and urethra by means of a urethral syringe. Inject six ounces of boric-acid solution into the bladder and allow it to remain. Pass the incisor into the bladder. If it will not enter readily, put a pillow under the hips. If, then, it can not be made to enter, give an anæsthetic (laughing gas preferably). Connect the incisor in the bladder by means of the cable with the battery. Turn the incisor so that its beak will point downward. Insert the left forefinger into the rectum and hook it over the base of the prostate. Pull the incisor forward until its tip is felt on or near the finger in the rectum. Withdraw the finger and take hold of the handle of the instrument with the same hand.

See that the contact screw is turned tight, and that

the water is running through the cooling apparatus. Throw in the two cells and turn on the current to forty or forty-five ampères. Turn the wheel until the knife has gone forward and backward through the floor of the prostate. Turn the instrument at a right angle and cut through the larger lateral lobe, and then turn it again at a right angle and cut through the upper or anterior part. Return the patient to bed. If followed by retention, pass a catheter and allow it to remain for one or two days. After-treatment: urinary antiseptics, diluents, and antispasmodics.

Judging from the cases upon which I have operated, this is the procedure for prostatic hypertrophy which exposes the patient to the least amount of danger, generally gives relief, and diminishes the amount of residual urine.

23 WEST FIFTY-THIRD STREET.

REPORT OF A NECROPSY IN A CASE OF ACROMEGALY,

WITH A CRITICAL REVIEW
OF THE RECORDED PATHOLOGIC ANATOMY.

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AND

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PART II.

By DR. LE COUNT.

(Concluded from page 560.)

Anatomical Description.—The height is 4.5 centimetres, the transverse diameter is 3.7 centimetres, and the width 2.7 centimetres. When viewed from above, it presents a smooth, hemispherical projection, which, a little to the left of the centre, possesses a tuftlike bit of tissue resembling fibrous tissue. This smooth surface is covered by a limiting membrane, which has become somewhat wrinkled from the alcohol. The posterior surface consists of three rather distinct portions; above, the posterior surface of the knoblike upper part, a middle area covered by a thin layer of bone or calcified membrane, and below an irregular surface which has a torn appearance. These three portions are about equal in extent. The front is a continuation downward of the smooth upper surface. The base and lateral surfaces are ragged, as though torn away. The membrane covering the upper surface is continued for a short distance over the lateral surfaces. On either side in the groove at the base of the knoblike part are rather large-sized vessels which curve forward from behind. On section it is uniformly dense, with a smooth surface which shows absolutely no markings. Portions of the entire surface obtained from a median sagittal section were studied.

Histological Description.—The growth is made up almost entirely of cells which have every appearance of glandular cells. They possess either oval or circular nuclei; the nuclear membrane is not darkly with nuclear dyes, and here and there in the nucleus are many dark granules. These granules show no peripheral disposition, but are dispersed over a lightly stained nuclear sub-

stance. The nuclei vary considerably in size, as do also the cell bodies. The bodies of these cells are moderately granular; the eosin staining in them is quite uniform as to depth of color. These cells are regularly disposed in clusters, and this arrangement is found prevalent in all parts examined. The groups do not vary much in size, but toward the periphery they show a tendency to form *rows and tubules* (*italics ours*).

The grouping of these cells is much more regular than would be expected in a sarcoma which was made up of such large round cells. The cells forming a group are in contact. The cell body is too great in amount and too irregular in quantity and disposition for a sarcoma cell. In a round-celled sarcoma the protoplasm of the body is scanty. Occasional cells occur with the nucleus near one pole, and where row formation is marked the columnar character of these cells is very conspicuous. Nothing resembling caryocinesis can be found. Between these groups of cells occurs a scanty amount of connective tissue, in which small blood-vessels are sometimes present. There are no very large trabeculae.

In sections from the more central parts of the growth are some rather large areas filled with a granular *débris*, which stains slightly with eosin. No well-preserved red corpuscles can be found in any section, even in the blood-vessels, but a granular *débris* is present in the vessels. This granular material must represent poorly preserved blood, and the areas points of hæmorrhage. Blood frequently presents this appearance in alcohol-hardened tissues. The areas of hæmorrhage are very irregular, with ragged edges, and in places the cells at the edges have become dislocated into the blood.

The similarity of this description to that of other growths met with in acromegaly in the hypophysis, and recorded as examples of round-cell sarcoma, lymphosarcoma, adenoma, and hypertrophy, is unmistakable. The growth described above is certainly one of the largest on record (39.76 grammes). From this examination we can eliminate sarcoma at once, for the following reasons: The glandular type of the cells; the regularity of their grouping; the fact that the cells are in contact, and the gradual change of the cell clusters into more or less typical rows and tubule formations at the periphery; lastly, there are no atypical or embryonal blood-vessels seen. Whether the growth is to be considered as an adenoma or as the result of hyperplasia is of much less consequence.

The elements of the anterior lobe are certainly increased in number, and it is equally certain that their normal arrangement is not preserved. It therefore follows that the epithelial cells of the anterior lobe have proliferated and produced a large tumorlike growth, and it seems preferable to call such a condition hyperplasia rather than adenoma, if by the latter term is meant a true benign tumor representing some gland in structure. If this be accepted as an example of hyperplasia, it must be acknowledged that many of the other

large solid growths found in the hypophysis in acromegaly are instances of hyperplasia also.

One of the strongest arguments in favor of this view is the fact that the conclusions drawn from the study of many of these growths fluctuate between hypertrophy and adenoma.

Again, the conditions most frequently observed concern round cells. Schütte mentions adenoma as having been observed eight times, sarcoma nine times, and lymphosarcoma five times; Sternberg says adenoma has been found seven times, sarcoma five times, and large-cell sarcoma six times.

If these growths were examples of a tumor as malignant as we know round-cell sarcoma to be, why do we not have cases of metastasis? Certainly not from lack of adjacent blood-vessels. And why are the phenomena of cell division so common to sarcoma entirely lacking in the histologic descriptions? It must be conceded that hyperplasia and not true tumor is the condition of the hypophysis in instances where large solid growths have been found.

But acromegaly does not depend upon a hyperplasia of the epithelial elements of the anterior lobe, for numerous cases are on record in which no symptoms of acromegaly were evident, and yet similar changes in the hypophysis to those just considered were found present. Reference will be made to but two:

Breitner described a growth the size of a pigeon's egg which filled the entire sella turcica, causing a depression in the brain and pressing upon the optic chiasm and nerves. It was covered by a smooth glistening membrane, and was not adherent to the brain. Microscopic examination showed it to be a simple hyperplasia of the hypophysis, with colloid degeneration. The author calls it adenoma. Breitner reviews the literature very thoroughly, and notes that many similar tumors have been described. More recently Hippel describes a large tumor of the hypophysis from the anterior lobe. It produced necrosis of the sella, and extended to the third ventricle. It was very soft, and was found microscopically to present a gradual transition between a peripheral portion resembling the normal anterior lobe and the tumor proper. Hippel does not name the growth because he was uncertain as to its nature, a similar confusion to that seen in conclusions drawn from studies of the hypophysis in cases of true acromegaly.

Acromegaly can not be dependent upon an abolition of function alone—a function the very existence of which remains to be proved—for the hypophysis is occasionally the seat of granulomata. Hektoen has collected five cases of gumma of the hypophysis, to which he has added a sixth. He also mentions two questionable instances of tuberculosis.

Any explanation of the pathogenesis of acromegaly must take into account a relationship between the hypophysis and the thyroid gland. This statement is authoritative, as will be seen from the following evidence:

Hofmeister, Stieda, Gley, and Goldberg, following Rogowitzsch, have found that the hypophysis becomes enlarged when the thyroid gland is removed. The work of Goldberg was done to determine the influence of the thyroid upon the development of the body, and he maintains that the hypophysis is one of the organs which influence the development of the body.

Boyce and Beadles, in a case of myxedema with atrophied thyroid, found a compensatory enlargement of the hypophysis; in a case of sporadic cretinism with entire absence of the thyroid, the hypophysis was also enlarged.

Bourneville and Bricon, Dolega, Niépce (five cases), and Osler have reported cases of cretinism in which either absence or atrophy of the gland was accompanied by enlargement of the hypophysis.

Schönemann, in a systematic examination of the hypophysis and thyroid in a hundred and twelve bodies, death from various causes, was led to believe in a close relationship between the two organs. Boyce and Beadles also examined the hypophysis in a hundred instances of death from various causes, in which the thyroid was unchanged. They found a great uniformity in the structure of the hypophysis.

Kocher reports finding the hypophysis enlarged in a case of death from cachexia strumipriva; the thyroid had been removed by operation. Pisenti and Viola, in a woman who died from struma fibrosum, report increased colloid formation in the thyroid gland. Comte examined the hypophysis in thirteen cases of death from, or accompanied by, goitre; it was enlarged in all. From the fact that the thyroid undergoes hypertrophy in pregnancy, and from observing enlarged hypophyses in six cases of death from pregnancy or its sequelæ, he concludes that a relationship exists between the two organs. He also found the hypophysis enlarged in a case of myxedema. Grön has reported a like occurrence, and Murray has collected six cases where acromegaly and exophthalmic goitre occurred together.

The hypophysis occupies a most peculiar position anatomically, surrounded as it is by bony walls, and held in position by the dura, which not only serves in places for periosteum, but also is intimately adherent to its capsule.

Quain states that "the pituitary body has a special prolongation of the dura mater completely inclosing it except above, where there is a small aperture for the passage of the infundibulum." Poirier gives the following description: "It (the hypophysis) is fixed in its position by the diaphragm, known under the name of the pituitary tent of the hypophysis, or tent of the hypophysis, and by the prolongations of connective tissue which unite its capsule to the dural covering of the fossa." Concerning the sella turcica, we find the statement that "the sella turcica is closed by the pituitary tent (operculum of the hypophysis, diaphragm of the sella turcica), a layer of dura mater which forms a roof

for it; on the anterior and posterior walls the dura forms the periosteum for the bone; the lateral walls of the cavity are formed by the dura, which rises up and closes in the space between the anterior and posterior clinoid processes."

From these quotations it is apparent that the hypophysis is unique in being so completely inclosed by firm walls. Another anatomical peculiarity of this organ, which has likewise been overlooked in the consideration of the pathologic changes to which it is liable, is its relation to blood-vessels. In front of it is the wide coronary sinus; behind, the posterior branch of the coronary sinus; and below, under the anterior lobe, many sinuses forming the intercavernous network.

It may not be amiss to ask what would occur in an organ surrounded by such fixed walls and so many venous sinuses should enlargement of the bony cavity take place primarily. The answer that naturally suggests itself is an œdema *ex vacuo*, possibly hemorrhages.

The large number of cases of acromegaly in which the enlarged sella turcica was found occupied by a fluid or semilfluid mass certainly supports such a supposition.

Caton and Paul, soft, dark, and dotted with hemorrhages; Brooks, soft and jellylike; Osborn, a pulpy mass; Holsti, very soft and semilfluid; Fritzsche and Klebs, a soft mass, liquid in the centre; Thomson, very soft and pulpy; Dallemange (1), friable; Hansemann, medium soft; Bourneville and Regnault, soft and gelatinous; Roxburg and Collis, soft and vascular; Linsmayer, a pulpy mass; Fränich, a walnut-sized cyst filled with blood; Dana, apparently somewhat cystic—serum and blood escaped; Claus and Van der Stricht, on section contained a fluid; Boltz and Fraenkel, soft in consistence; Bailey, red, very soft, some semilfluid contents escaped; Furnival, converted into a cyst; Johnstone and Monroe, softer than the brain; Hunter, red and very vascular; Comini, softened; Strümpell and Zenker, microscopic areas of hemorrhage; Sigurini and Caporiccio, soft; Mitchell and Le Count, a pulpy, semilfluid mass; Dalton, much softened.

Much of the obscurity surrounding the pathogenesis of acromegaly—at least the prevailing connection between acromegaly as a disease and the changes in the hypophysis as its cause—can be attributed to the difficulty of experimentation. The inaccessibility of the organ is not the least obstacle. It is certain that experimental work should take into consideration, if possible, a primary enlargement of the sella turcica.

In concluding this *resumé* of the pathologic anatomy of acromegaly, the following propositions which directly concern the elucidation of its pathogenesis seem to have acquired prominence:

1. The cases of acromegaly associated with true tumor of the hypophysis are certainly not as numerous as has been heretofore supposed.

2. There is not as much connection in the pathologic condition of the hypophysis as there is in an enlarge-

ment of the heart, the thyroid gland, or the sella turcica.

3. Acromegaly does not depend, at least not solely, upon abolition of any function of the hypophysis.

4. A relationship between the thyroid gland and the hypophysis has already been amply proved.

5. It is not at all improbable that proliferation of the histological elements of the hypophysis may be instituted in some cases by a primary enlargement of the sella turcica; in other cases, an oedema or hæmorrhage *ex vacuo*.

6. We have no reason for supposing that enlargement of the sella turcica may not be as constant an occurrence in acromegaly as the changes in other bones, or that it might not take place from a similar cause or causes.

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PROTHYMIA:

A NEW FACULTY AND ITS LOCALIZATION.

By WALLACE WOOD, M. D.

SOME four years since I began preparing the brains of domestic animals by the dry process. The following is the method: I pass the specimen successively through nitric acid, bichromate, carbolic, glycerin, and oil of cloves. I then paint it, varnish it, and reproduce six copies in plaster and in photography. My studies have been chiefly swine and rabbits, felines and canines, horses, and some fifty cattle. The collection so formed I took in part to Europe last summer in order to compare these brains of domestic animals with the two collections of the brains of wild animals, one in the College of Surgeons, London, the other in the Jardin de Plantes, Paris. At both places I was offered every facility. At the Jardin de Plantes I was given a special room, and the jars were opened for my inspection. I was also presented with copies of the brains of two lions, one lioness, one American black bear, and one Indian panther. For such kindness as this, what thanks are adequate? I was much gratified at obtaining these specimens. I was, for instance, able to compare the brain of an Indian panther with that of the Newfoundland dog, and the brain of the African lion with that of an old New York working lion of very good breed that had died in harness, a specimen that had given me no end of pains and cares. By a six months' study of these two collections, comparing and contrasting

them with my own, I seemed to find further proof of the existence or localization of a cerebral faculty with which I had already been strongly impressed while working upon the domestic animals only.

In making my collection the region to which I had directed all my attention was the inner-under surface; the point, therefore, which is the subject of this brief article was unlooked for and was gradually forced upon me. I noticed an extraordinary roundness and fullness in the coronal or metopic region of the hemispheres of certain cows and horses contrasting in a surprising way with the same region in other animals. I had this same roundness, this forwardness of front, forced upon my view when looking at the mesial surfaces of the brain of the Newfoundland dog, the terrier dog, and the sheep.

Following are the observations:

The metopon, or anterior metopic lobule, in the Newfoundland dog presents an appearance of swelling forward, or pushing or surging forward, while that of the pug dog shows a contrary tendency: it seems to slope or sag and hold back. This same forwardness of line or curve in the horse is so strong that, comparing it with the run of brains in the animal series, it seems almost, as it were, tremendous or "prodigious."

This same willingness to come forward I found in the mesial metopic line of the black-and-tan dog, and this same unwillingness to come forward in the brain of *Felis domesticus*, the cat of either sex.

The grand arch line of the brain of cats, as seen from the mesial surface, shows a back-upwardness, while that of good dogs shows a forwardness or forward-upwardness.

This round-coming form of the coronal struck me first in the cerebrum of the Newfoundland dog, next in the cow and horse. I have thought that the left hemisphere showed it more than the right; it is "always" the left hemisphere, however, that is typical. This coming-round form, this willingness to come forward in the curve, I found prominent in the sheep and wanting in swine. The brain of the sheep comes forward willingly, the brain of the swine comes forward unwillingly.

The normal or native appearance of the brain of a wild animal, and of many or most domestic animals, is that of a life pulling or arching itself in a direction backward-upward. The form that I am seeking to describe seems a contrary tendency or effort.

If we essay to translate this metopic or coronal curve into the language of psychology, would not the quality be *eunoia* or *prothymia*? This willingness to come forward, is it not mental as well as cerebral? The horse comes forward willingly to be harnessed; the cow comes forward willingly to be milked; the dog comes forward willingly to fetch a stick from the water, and the sheep comes forward willingly to have its wool cut or its throat cut, or whatever you like.

We turn now to the contrary mental disposition: the

pig comes forward most unwillingly, the domestic cat comes forward always with a mental reservation. The temper of the pug dog is, I believe, quite unlike that of the Newfoundland dog. As for the wild cat, the lion, the panther, or the wolf, suffice it to say here that they do not come forward with their metopic lobule or mesial metopic curve, but with something else, not with the metopic centre, but with another centre. It seems to me that what I have found is true. As a pupil and follower of Broca I know how hard it is to ground with scientific certainty even the smallest point, but I believe this can be grounded.

164 FIFTH AVENUE.

A SUMMER FALLACY.

By RAMSAY MACNAUGHTON, Esq.,
MANCHESTER, VT.

CITY dwellers will soon be saying they are going up in the mountains. This is correct, if we believe language was meant to conceal thought. In this case it seems to indicate a lack of thought. Many would be dumbfounded if they realized the fact that they went *down into* the mountains, and were but a few hundred feet higher than their more accurate acquaintances who say they go down to the sea.

Strange as it may seem, those who go down, frequently attain more and better air and sunlight than those who think they go up. The latter are too often found down in the howels of the earth, in deep narrow valleys, by chilly streams, shut in from sunlight by overhanging mountains.

No doubt many are benefited; for summer time, outdoor life, exercise, and pleasure will accomplish that anywhere, and an inland place will suit some as the seashore will not. But Americans have not yet, like the Europeans, learned the greater advantages and delights of elevation.

Neither is the medical fraternity to blame, for until the recent advent of the contour maps of the United States Geological Survey, elevations were rarely and not reliably given. These remarkable maps are in sheets of thirteen by seventeen inches, representing five by seven miles, and can be had on application for five cents each.

No physician can afford to be without these sheets for ready reference of all those localities that he is inclined to send patients into. Dots on the maps indicate the exact position of every habitation, whether it be sanitarium, health resort, or private dwelling.

The minute lay of the land is given, disclosing faithfully any hidden marshes or low wet spots, and the course of every little brook and large bodies of fresh water, also the slope of the land and its exposure. Heretofore those seeking summer patronage in places having no elevation claimed it because it was impossible

to disprove it, especially if the air seemed good and the place healthy.

Persons who unquestionably live at a moderately high elevation have vague ideas of thousands of feet, maintaining the elevation to be as much as five thousand, though rarely reaching fifteen hundred.

The limit of inhabited places back of the Hudson ranges below nine hundred feet, and is usually from five to six hundred, and the air is merely fresh and pleasant, never bracing. The Litchfield Hills are about a thousand feet, with good and often bracing air.

The Berkshire Hills have a bracing air and twelve hundred feet elevation, which in the village of Mount Washington, near Great Barrington, attains two thousand feet. Here air, woods, and other conditions are not excelled by the Adirondacks, Catskills, Green, or White Mountains.

Too many of the places in these last four localities have no elevation beyond a few hundred feet, though well back in the mountains and reached by ascending roads, until a final pitch of a mile or two brings the traveler down into a hole in the ground. The most favored places in the Adirondacks halt at eighteen hundred feet, the air and the influence of woods being very fine.

Catskill places, as a rule, do not come up to a thousand feet, and are too often shut in. A fair number range up to fifteen hundred, and three are at three thousand feet.

Except on back-mountain roads, not yet frequented, the Green Mountain places range a thousand feet, which, with vast spruce woods and bracing air, combine conditions best suited to most people. The tonic and stimulus derived does not surcharge the system or produce wakefulness, discomfort, or after-reaction.

The White Mountains enjoy these features with somewhat higher elevations, except the approaches to them, where they amount to nothing.

A mountain resort needs few if any trees; the more open and exposed and away from water the better.

Europeans have long attached great significance to this matter of elevation, which is known and studied thoroughly by the medical profession abroad, and is never slighted.

No place in Switzerland, or other mountain health resort, is without its elevation put officially in a conspicuous place and incessantly advertised by all lines of business. In Switzerland one can, by easy changes and stages, pass up five hundred feet at a time, and spend weeks or months getting acclimated to the final elevation of San Moritz, Davos, and a few other places of six thousand feet. Higher inhabited elevation can be found only at inns and hospices on tops of mountain passes, which are primarily places of refuge, and the sojourner is expected to stop only overnight. These places are situated at an elevation of from eight to ten

thousand feet. Many can not stand several thousand feet without all manner of temporary functional ailments, with every indication of considerable ill health. Sleeplessness is a common discomfort, and often one must hang up a sheet rung out in water or sprinkle the bedroom before sleep is possible.

In this country we have no such conditions until one gets well up into the Rockies; there the very high elevations and peculiarly rarefied atmosphere are greatly beneficial to many, but if indulged in for too long a time they will create nervousness and conditions supposedly common only to low places and damp climates, such as rheumatism and catarrh, which are prevalent.

A CASE OF CHRONIC INFLAMMATORY INDURATION OF THE CORPORA CAVERNOSA.

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THE rarity and the comparatively few cases on record of this condition lead me to report the following case which recently came under my observation:

A. B., married; native of United States; professional man; general history good; family history good. Date of examination, March 3, 1899.

The attention of the patient was first called to the existing condition some eight weeks ago by noting a slight deformity of the penis while in a state of erection. This deformity consisted in a bowing or arching of the organ, the point at which the bending occurred being located a few centimetres posterior to the glans on the dorsum of the penis. This erectile deformity, slight at first, increased gradually and persistently until at date of examination a pronounced "bird-neck" appearance was apparent during erection.

Examination shows an oval, flattened, indurated mass, measuring about a centimetre in width by 1.5 centimetre in length, situated about three centimetres posterior to the corona of the glans on the dorsum of the penis. The induration is in the median line, beneath the integument, which shows no evidence of implication, and is freely movable. From this oval mass a smooth, rounded prolongation extends backward to the root of the penis. No evidence of the presence of the enlargement is apparent upon inspection of the flaccid organ, and none while in a condition of erection, beyond the deformity alluded to.

The indurated mass occupies and evidently consists of a thickening of the tunica albuginea, with mesal line, including the septum, and probably to a slight extent the corpora cavernosa. The mass is firm, and gives an elastic, semi-articular sense of resistance when firmly grasped between the fingers.

The patient gives no history of any other period of the disease, erection and nocturnal emission giving merely a feeling of discomfort.

No pain or tenderness or other evidence of inflammation is obtainable. No history of stricture, priapism, gonorrhoea, or syphilis. General health about ordinary examination negative.

Therapeutical Notes.

The Chronic Dyspepsia of Children.—Dr. E. Decheri, in a Paris thesis (*Archives de médecine des enfants*, April), gives the following formule:

1. R Sodium bicarbonate, }
Calced magnesias, } each, 3.5 grains;
Benzonaphthol, }
Powdered nux vomica 0.3 of a grain.
M. Such a powder to be given twice a day for ten days.
2. R Sodium bicarbonate 3.5 grains;
Neutral bismuth sal- }
icylate, } each, 1.3 of a grain;
Benzonaphthol, }
Powdered nux vomica 0.3 " "
M. To be used in the same way (in cases of diarrhoea).
3. R Glycerin 15 grains;
Alocs 1.5 grain;
Extract of belladonna... 0.15 of a grain;
Cacao butter a sufficiency.
M. For a suppository (in cases of persistent constipation).
4. R Calomel 0.15 of a grain;
Powdered anise seed .. 0.75 " "
Powdered nux vomica 0.077 " "
Sugar of milk 7.5 grains.
M. One such powder three times a day (for tympanites).
5. R Oil of sweet almonds 20 parts;
Tincture of nux vomica 2 " "
M. To be rubbed upon the abdomen.

Prevention of Hereditary Syphilis.—A. Fournier, in a Paris thesis, 1898 (*American Journal of Obstetrics and Diseases of Women*, March), advises mercurial treatment of the mother during pregnancy, even though she is healthy, if the transmission of syphilis from the father is feared. This method has proved successful in cases in which the father was affected with syphilis while the mother was not. Treatment should be begun as early in the pregnancy as possible, and should be administered twenty days in each month, then the administration of mercury should be suspended for ten days.

Calcium Permanganate in the Treatment of Pultaceous Angina.—Mommarsion (cited in the *Klinisch-therapeutische Wochenschrift* for April 2d) recommends painting the affected parts every three hours (twice during the night) with this solution:

- R Calcium permanganate 1.5 to 3 grains;
Water 300 "

M. Each application should be preceded by gargling with a four-per-cent. solution of boric acid, as hot as can be borne, and by gentle efforts to detach the false membrane.

The Action of Heroine. Dr. B. Turnauer (*Wiener medicinische Press*, March 19th; *Klinisch-therapeutische Wochenschrift*, March 26th) remarks that heroine, the diacetic acid ester of morphine, has a sedative action on the respiration even in doses only one tenth as large as those of codeine, although the fatal dose of each is the same. He has used heroine in the form of

powder (0.015 of a grain, with sugar) as a rule three times a day, and in that of a solution ($\frac{1}{3}$ of a grain of heroine to half an ounce of cherry-laurel water), from fifteen to twenty drops at a dose, not more than two doses to be given in the course of a night. He has used the remedy on forty-eight patients with phthisis, bronchitis, emphysema, or various forms of dyspnoea, with the following results: In many cases it failed or was less effective than morphine. It begins to take effect in from ten to thirty minutes; the disposition to cough soon subsides, then languor and drowsiness supervene. This lasts for two hours. Subjective dyspnoea is decidedly lessened. The patient becomes accustomed to the drug, but no unpleasant effects are observed to follow the discontinuance of its use. Nausea followed its employment in two cases. It is an efficient remedy for cough even in persons habituated to narcotics.

For Dipsomania.—The *Cronica medica* for February 15th gives the following:

- R Apomorphine 3 grains;
Tincture of calumba 450 "
Tincture of capsicum 15 drops;
Tincture of nux vomica 450 grains;
Compound tincture of cinchona 750 "

M.

A small spoonful to be taken after meals in a little water.

Credé's Ointment in the Treatment of Phlegmasia Dolens.—Dr. Peters (*Deutsche medicinische Wochenschrift*, March 9th; *Klinisch-therapeutische Wochenschrift*, March 26th) reports a case in which somewhat more than four hundred grains was used with a favorable result. There were no phenomena of argyrosis.

An Ointment for Hæmorrhoids.—A writer in the *Nord medical* for March 15th gives the following formula:

- R Cocaine hydrochloride 15 grains;
Ergotine 60 "
Ichthyol 75 "
Calomel 45 "
Vaseline, { each 225 "
Lanolin, }

M. A portion as large as a small nut to be inserted into the rectum after an evacuation.

Brewer's Yeast in the Treatment of Leucorrhœa.—Landau (cited in the *Klinisch-therapeutische Wochenschrift* for April 2d) has used yeast in about forty cases, and for the most part with excellent results. Through a speculum he injects from ten to twenty cubic centimetres against the fundus of the vagina, and then inserts a tampon. The tampon is to be retained for twenty-four hours. This is repeated every second or third day. In two cases itching of the vagina was complained of, but there were no other unpleasant effects. The yeast is kept on ice and obtained fresh every three days.

An Ointment for Sciatica.—The *Riforma medica* for March 25th gives the following as Hirschhorn's formula:

- R Oil of hyoscyamus, { each 5 parts;
Oil of turpentine, }
White wax 2 "
Simple ointment 40 "

M.

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THE STERILIZATION OF MEN.

IN our issue for January 28th we published an editorial on The Sterilization of Women, referring therein to a new method of procedure for effecting that end which was advocated, and has been practised, by Professor Spinelli. We were moved to consider this matter by the tendency now becoming, as we think, unfortunately common to aim at the legislative restriction of marriage, with a view to lessen the danger to the community arising from the procreation of diseased and degenerate offspring. This danger is undoubtedly a real one, and if we are honestly and firmly opposed to all such restrictive marriage legislation, it is not because we are not in hearty accord with the object aimed at, but because we think that the proposed means would create evils wider, more far-reaching, and more deplorable than even the results against which they are directed. In our editorial already referred to, as also in a subsequent one on The Disquieting Frequency of Criminal Abortion, which appeared in our issue for February 25th, we took occasion to refer to what we consider to be the real aim and purpose of the love union of a man with a woman—viz., the perfect, intimate, and complete companionship, mental, emotional, and physical, between two persons of opposite sexes who are, or should be, the perfect complements of each other, and without which association the life of both is liable to be forever incomplete. In using the word "perfection" in this relation we are, of course, well aware that in this existence at any rate such perfection is not attainable; but that is no reason why the ideal should not be aimed at, for the higher the aim the nearer to perfection will the result be, even though, as in the case of the mathematician's " x to infinity," it can never be completely realized.

We have contended that with the union of the man and the woman *per se*, the community has nothing to do. It is only by virtue of its potential results that the community acquires any right to intervene at all. Now, it is conceded on all hands that the unrestrained reproduction of the physically or mentally diseased or degenerate is a menace to the welfare of the community; but, as we have stated, "we can not but feel that there

are numberless instances in which a safe and easy method of rendering women sterile, when pregnancy would be a source of more than ordinary danger to the individual, or a direct wrong to the community, is far better than a harsh prohibition of that union without which, when rightly entered upon, the highest aim and incentive of life is incomplete, and in many cases life itself becomes a burden and a despair."

The sterilization of women, however, would be properly a solution of only half the problem. When the source of danger is to the woman, her sterilization is of the greatest moment to herself. When, however, the danger threatens the community, it is obviously only reasonable to place the burden of protection against it on her when she is the element in the union through whom the menace is likely to come. It is quite conceivable that a woman, herself perfectly healthy, may love and desire to enter into marriage with a man whose offspring, should he have any, would be most undesirable acquisitions to the race. Doubtless, in many instances, she would be quite willing to forego the joys of maternity rather than lose the companionship of the one man who is, or at any rate whom she believes and feels to be, her true mate, and would be ready to that end to submit herself to any necessary process. But there is another side to that question. The marriage may not turn out as was expected. The husband may prove dissolute, love be destroyed, and the law put an end to the relation; or, even if the union proves all that was hoped for, the husband may die while the wife is still in her prime and capable of forming a new attachment, in regard to which no reasons against procreation can be urged; and what is to be done then? She can not be "resexed," so to speak.

It is therefore plain that the sterilization of women, even if it can be safely and securely effected, is a remedy for only half of the evil. The question is what to do in the case of the other half.

Now, while a woman can be rendered securely sterile without affecting her capacity for the physical part of her union, all the plans hitherto suggested for sterilizing the male have been open to the objection that in accomplishing that end they rob him also of his capacity for the physical part of his union with the woman.

At this juncture we have read with great interest an article by Dr. A. J. Ochsner in the *Journal of the American Medical Association* for April 23d on the Surgical Treatment of Habitual Criminals. Dr. Ochsner relates two cases in which, for certain morbid conditions, he resected the vasa deferentia on both sides through an incision just below the external inguinal ring. Of the effect upon the patient, he states with regard to

the first case that twenty months after the operation the patient was perfectly well, and his sexual power, which had been somewhat impaired before the operation, was fully as good as at any time during his life. With regard to the second case, he asserts that the patient has been perfectly well ever since, and has found no impairment of his sexual desire or power. He further refers to recorded observations of analogous cases in which complete obstruction of the vasa deferentia as a consequence of gonorrheal inflammation, although the subjects were necessarily rendered sterile, did not result in any lack of sexual inclination or power. Dr. Ochsner's suggested operation consists of an incision, made with thorough aseptic precautions and under local anæsthesia, in the direction of, and directly over, the cord down to the vas deferens and not exceeding one inch in length; the isolation of the vas deferens for the distance of half an inch; its ligation with catgut and division half an inch below this; the closure of the wound with a buried catgut stitch; and the application of a collodion dressing. It can be performed, he says, in less than ten minutes, without pain, and with practically even no subsequent scar.

Dr. Ochsner's main argument from these cases is a plea for the employment of such an operation as a means of dealing with certain criminals; but should it fulfill all that it promises, it seems in conjunction with Spinelli's operation to shed a ray of light on the dark paths, and to promise a means whereby less cruel, and in our opinion less unjustifiable, measures for protecting the race against the procreation of the diseased and the degenerate may be sought, than the arbitrary and unwarrantable one of robbing individuals of the whole of the greatest blessing of life, viz., the "glorified companionship of matrimony," in order to obviate the possible results of one function thereof.

There is another consideration also which must be reckoned with in this matter. The progress of scientific observation is rendering it clearer all the time that in some fashion, whether from nervous influence or by their internal secretions, glands like the testicles and ovaries are intimately connected with the character and constitution of the individual, and that their excision has a marked and permanent effect upon the personality. For this reason, therefore, any measure which will do away with the necessity of their removal in such cases is to be welcomed.

Of course we are only on the threshold of this inquiry. But we think that the men who demonstrate the feasibility and certainty of any safe means for effecting the sterilization of both men and women will do more good to the race, without inflicting harm or injus-

tice on individuals, than the well-meaning but, in our opinion, unwise promoters of antimarriage legislation.

NERVE-STRETCHING APPLIED TO THE SOLAR PLEXUS.

It seems that the surgeons have not yet exhausted the territory which they think they can invade to the advantage of the patient. Close upon operative procedures on the cervical sympathetic for exophthalmic goitre comes the proposal to attack certain trunks of the solar plexus for the relief of various functional disturbances of the abdominal organs. In *Lyon médical* for March 26th M. Jaboulay declares that there is a series of affections of the pancreas, the liver, the spleen, the kidneys, the suprarenal capsules, the aorta, and the intestine which denote abnormal action of the abdominal sympathetic system. They are connected, he says, with that malady which is so frequently the pendant of exophthalmic goitre in neuropathic patients, characterized by arterial pulsation in the scrobiculus cordis and by enlargement and paresis of the intestinal coils.

His mode of intervention is as follows: Through a median incision of the abdominal wall the pylorus is drawn down, and the abdominal aorta is sought for with the left index finger. The celiac axis and the renal arteries are readily detected by their pulsation; then with a grooved director the celiac axis and the fore part of the aorta are denuded in the neighborhood of the tripus Halleri and downward by the side of the superior mesenteric as if one were about to perform ligation. This process of denudation suffices to make impression enough for the purpose on those branches of the solar plexus which cross in front of that portion of the aorta after having been given off by the semilunar ganglia, and preside over the functions of the stomach, the intestine, the liver, the pancreas, the kidneys, the spleen, and the suprarenal capsules.

Thus far, M. Jaboulay has had occasion to practise his operation only once, in the case of a woman who had undergone surgical intervention five times on account of pyosalpinx and hemorrhagic metritis following parturition. He intimates that her condition was ameliorated by his procedure, but he attaches no importance to that fact; the operation, which was done on the 28th of January, 1899, is of interest, he remarks, solely as demonstrating the feasibility of such treatment in really grave cases. This woman had epigastric pulsation and intestinal enlargement. We are not told to what extent she was improved by the operation on her solar plexus. M. Jaboulay seems to think that in such cases as he refers to the "abdominal brain," as the plexus was

formerly called, is in a state of overactivity; it must rest with the physicians, he says, to select the instances in which the intervention he describes would be likely to be of service.

TETANY AND HYSTERICAL PSEUDO-TETANY.

It is not a little remarkable that it must still be said of an affection so sharply characterized as tetany that its very existence, apart from hysteria, is denied, or at least doubted, by men who are known as excellent observers, including so astute a clinician as Gilles de la Tourette. It is very satisfactory, therefore, to find von Krafft-Ebing (*Prager medicinische Wochenschrift*, April 8th) quite outspoken in the declaration that there is no neurotic affection on a firmer diagnostic foundation than tetany. He accounts for the skeptical attitude of many of the French physicians by the fact that tetany is rare in Paris, whereas hysteria is rife in that city, as in all centres of culture.

He gives short histories of five cases of pseudo-tetany that he has observed. In not one of them was Erb's sign present, and he insists that that test is a sure mark of distinction between tetany and pseudo-tetany. He adds that in no case of true tetany on record, save Weiss's, cited in von Frankl-Hochwart's monograph, has there been wanting the presence of heightened excitability of the motor nerves, especially the ulnar nerve, under the galvanic current. Since in no other disease of the nervous system, certainly not in hysteria, is this condition found so pronounced as in tetany, he goes on to say, Erb's sign must be held to be the most striking means of distinguishing the real disease from its hysterical counterfeit, although there are various other means that ought generally to serve every purpose. True tetany, von Krafft-Ebing declares, should be distinguished without difficulty from hysteria, the only disease that mimics it.

A COUNTRY DOCTOR.

In our issue for April 15th we quoted some exquisite verses To a Certain Doctor that most feelingly portrayed the true physician's trustful crown. Such sentiments as are therein expressed have ever been theoretically, and in many instances practically, the highest and most gratifying reward of the high-minded medical practitioners in all ages and climes. It is with great pleasure that we have recently read what we may perhaps be allowed to call a prose poem on A Country Doctor, written by Dr. Thomas Hall Shastid. That this admirably written tribute to a hardworking, heart-hearted, great-souled physician, toiling humbly, but not too remuneratively, yet with all his heart and soul in his work, and still finding time to keep up some of the attainments of the classical scholar, is paid to the author's own father is no detriment, but rather reflects

on the son some of the honor thus accorded to the father. If the country doctor whose honorable career is here recorded has cause for greater gratification at anything than that his career has been such as is described, it is that he has been able to inspire his son with such a reverence for it as shows plainly through every line of this little book. The book, illustrated with admirable etchings, is published privately by the author for his friends; but the previous appearance of the sketch in the columns of the *Journal of the American Medical Association* for February 27, 1897, justifies us in referring publicly to it as a pleasing addition to that literature of the "doctor to fame unknown," whose archetype will long be remembered in Ian Maclaren's Dr. William Maclure.

THE HUNDREDTH ANNIVERSARY OF THE MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

The meeting which has been going on in Baltimore this week has been as interesting and satisfactory as everybody expected who knew the physicians of Maryland. The programme was unusually rich in papers and demonstrations by men of eminence: the president's address, by Dr. Chew, and Dr. Keen's address were impressive to a degree that could not have been surpassed; the medical schools and hospitals of Baltimore contributed most profitable clinics and exhibitions; and Baltimore hospitality was at its best. One could not ask for more. We congratulate the faculty on its ever-increasing vitality.

TUBERCULOUS INFECTION IN RITUAL CIRCUMCISION.

THERE seem to be good reasons why ritual circumcision should give rise to tuberculous disease oftener than to syphilis among the strictest of the orthodox Jews, as is briefly set forth by Dr. Lubowski in the *Monatsberichte über die Gesamtleistungen auf dem Gebiete der Krankheiten des Harn- und Sexual-Apparates*, iv, 4, 1899. He is commenting on an instance reported by Dr. Neumann, of Vienna (*Wiener klinische Wochenschrift*, 1899, No. 6), of tuberculous infection conveyed by a peritonist who infected six children in the course of six months. Among the poorer classes of the orthodox Jews, says Lubowski, the old custom of checking or diminishing the hemorrhage by sucking the penis is rigidly adhered to, and the sucking is done by the circumciser himself or by some other person, especially a very honorable and elderly man; and it is in just these circles of the Jewish population that tuberculous disease is particularly rife, while they are practically free from syphilis.

HABIT MADE TORTICOLLIS.

BRISSAUD has described a form of torticollis which he regards as "mental" in its origin, that is to say, taking its origin in an enfeeblement of the will due to a state of mental depression. Dr. F. P. S. Ober (*Manifesto moderno*, 1898, No. 3; *Presse médicale*, April 5, 1899) has lately recorded a case in which a melancholic woman passed almost the whole of her time with her wing or knitting near a window situated on her right, and, being given to looking out there, the window frequently found her face so that her face was habitually turned to the right, and that she could not face straight ahead without turning her head with her hands.

THE PASSAGE OF DRUGS INTO THE SYNOVIAL FLUID.

THE actual invasion of a rheumatic joint by such a drug as salicylic acid or potassium iodide may be the *modus operandi* of the medicament in alleviating the manifestations of rheumatism. So, at least, Dr. Gaglio (*Archivio di farmacologia e di terapia*, v, 1898; *Deutsche Medizinal-Zeitung*, April 3, 1899) hints. In experiments on dogs he has found both these drugs in the synovial fluid after their ingestion by the mouth or their subcutaneous injection, but only for brief periods.

ICE MASSAGE.

DR. WILLIAM EWART, in the *Lancet* for April 8th, after considering the various modes of employment of heat and cold as therapeutic measures for the relief of pain, records three cases of painful joint affection with severe constitutional disturbance in St. George's Hospital, London, in which instant and marked relief, followed by permanent improvement, was obtained by gently rubbing the inflamed and painful parts with a small block of ice held firmly in the hand with flannel. Considerable local coldness was felt by the hand, and the patient experienced a sensation of coldness and numbness with freedom from pain. These sensations lasted in the first case for three quarters of an hour, and were followed by an internal glow resembling the pleasant warmth felt from sitting in front of a bright fire. The patient described the glow as reviving the feeling within the joint and destroying the pain, and as entirely differing in character from the hot pain with dragging feeling which constituted his special suffering. This treatment was used in all three cases after all ordinary methods had failed, or had even aggravated the patient's condition. This method differs from Arnott's direct application of ice, Esmarch's continuous use of ice-bags, and Kinnear's spinal ice-bag. The remarkable histories of the cases described would, we think, warrant its wide trial.

THE EFFECTS OF BILE ON SEPTIC PROCESSES.

BILE is commonly regarded as an antiseptic. By experimental researches Mosse (*Zeitschrift für klinische Medizin*, xxxvi; *Centralblatt für innere Medizin*, April 8th) has been led to conclude that, while for a time it is capable of inhibiting the development of fermentative and putrefactive agents in mixtures that are free from bacteria, if that development is once set up it seems rather to favor the decomposition induced.

A JUVENILE SURGEON.

MR. EDMUND OWEN, of London, has taken some pains to let it be known that he is a stickler for precision of speech. A few months ago he expressed his horror of the word *trauma*, which he stigmatized as having been imported from America. He was in error in making that statement, but the error does not detract from the genuineness (but utter groundlessness) of his disgust for the word. We have since seen further evidence of Mr. Owen's earnestness as a reformer of speech. The *Medical Press and Circular* for March 15th reports him as having, at a society meeting, "objected to the expression 'radical cure,' preferring to style it the operation for radical cure." This criticism strikes us as on

a somewhat higher plane from the purist's point of view than Mr. Owen's subsequent remarks, which are put as follows in the report: "He urged that unless the infant were well looked after it might be necessary to operate under six years of age. He himself operated as young as three." The italics are ours.

AN OVERDOSE OF PELLETIERINE.

THE *Centralblatt für die gesammte Therapie* for April cites from the *Deutsche Medizinal-Zeitung* a case reported by Cielas in which half a gramme (between seven and a half and eight grains) of pelletierine sulphate, given to an epileptic thirty-four years old to expel a tapeworm, produced death within a few hours, preceded by vertigo, vomiting, cramps and paralysis of the limbs, and coma. The occurrence leads Cielas to recommend that in the treatment of tapeworm the tannate of pelletierine be used instead of the sulphate. To the best of our information, the tannate is already the salt of pelletierine most commonly used, and we think a more pertinent suggestion would be that of prescribing a much smaller dose.

THE BICYCLE FOR PERSONS WITH HERNIA.

THE indications are that it will soon be difficult to mention an ailment whose victims, provided they are not bedridden, may not, in somebody's opinion, derive benefit from the use of the bicycle. M. Vermeulen (*Presse médicale*, April 8th) cites M. Lucas-Championnière as maintaining that persons with hernia find that bicycle-riding strengthens the abdominal wall, improves the general health, moderates the tendency to obesity, flatulence, and constipation, and is capital for muscular weakness.

HEREDITY WITHOUT COLLUSION.

THE Rev. Edward Everett Hale has lately produced a book entitled *James Russell Lowell and His Friends*. We have not seen the book itself, but in a newspaper review we find this quotation from it: "From no indulgence of his own, he was a victim of hereditary gout." As the review appeared in the *Sun*, we take it for granted that the quotation is correct, and must absolve the late Mr. Lowell from having been accessory to his unwelcome heritage.

SUPPURATIVE EPIDIDYMITIS IN TYPHOID FEVER.

SUPPURATION of the epididymis is one of the rare complications of typhoid fever. In an abstract (*Centralblatt für Chirurgie*, April 8th) of a report of a case by Strasburger (*Münchener medizinische Wochenschrift*, 1899, No. 1) we find it stated that there are only eight cases on record. In Strasburger's case, in which the inflammation began during the third week of convalescence, there was no preceding urethral catarrh. The pus contained typhoid-fever bacilli.

THE SURVIVAL OF THE PNEUMOCOCCUS OUTSIDE THE ORGANISM.

M. LEMÛRE (*Nord médical*, April 1st) recently reported to the Society of Medical Sciences of Lille some experiments which he had made with pus taken from a child four months old, who died from the disease. Ex-

amination at the time showed staphylococci and some indeterminate forms which might have been pneumococci, but cultures therefrom gave colonies of pneumococci in forty-eight hours. Three months and a half later M. Lemièrè found that the flask containing the sown pus contained fertile cultures of pneumococci, but no staphylococci. This pneumococcus was still virulent and produced death on inoculation into mice. M. Lemièrè draws attention to the importance of this fact as indicating the danger attendant upon the exposure of slowly drying pneumonic sputum.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending April 22, 1899:

DISEASES.	Week ending Apr. 15.		Week ending Apr. 22.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	8	4	15	7
Scarlet fever.....	227	4	217	16
Cerebro-spinal meningitis.....	0	16	0	11
Measles.....	270	12	335	16
Diphtheria.....	199	39	180	26
Croup.....	15	2	13	7
Tuberculosis.....	202	173	191	141
Small-pox.....	20	0	2	1
Chicken-pox.....	30	0	26	0

The Congress of American Physicians and Surgeons.

—At a recent meeting of the executive committee the following officers of the congress were elected: President, Dr. H. P. Bowditch, of Boston; secretary, Dr. W. H. Carmalt, of New Haven; treasurer, Dr. Newton M. Shaffer, of New York; chairman of the executive committee, Dr. Landon Carter Gray, of New York; secretary of the executive committee, Dr. W. K. Simpson, of New York. The next congress will meet in Washington in May, 1900.

The Loomis Laboratory.

—The legislature has passed a bill empowering the trustees to dispose of the property, and it has been signed by the governor.

The State Board of Health of Delaware

has established a laboratory in Newark, at the State college, for the purpose of aiding the physicians of the State in the diagnosis of typhoid fever, diphtheria, tuberculosis, and other diseases in which an examination of urine, blood, feces, stomach contents, etc., may be necessary. The aim will also be to carry on original investigations with a view of furthering the progress of sanitary science in general and bacteriology in particular. Professor Chester, State bacteriologist, has been appointed director and Dr. A. Robin bacteriologist and pathologist.

The New-Yorker medicinische Monatsschrift. Dr. A. Ripperger has become the editor, succeeding Dr. Alfred Michel.

Changes of Address.—Dr. A. C. McGuire, to No. 1851 Seventh Avenue, New York; Dr. William O'Donnell, to No. 253 East One Hundred and Twenty-third Street, New York; Dr. W. H. Proleau and Dr. Lord C. Valentine, to No. 31 West Sixty-first Street, New York.

The Death of Mr. Jabez Hogg, of London, is reported to have taken place on April 23d. He was eighty-two years old. For many years he was a prominent ophthalmologist.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, and plague were reported to the supervising surgeon-general for the week ending April 22, 1899:

Small-pox—United States.

Los Angeles, Cal.....	Mar. 25-Apr. 8	4 cases.	1 death.
Denver, Col.....	Mar. 18-Apr. 1	9 "	
Washington, D. C.....	Apr. 1-18	17 "	
Jacksonville, Fla.....	Apr. 8-15	1 case.	
Elmira, Ind.....	Apr. 8-15	2 cases.	
Louisville, Ky.....	Apr. 1-6	15 "	1 "
Louisville, Ky.....	Apr. 6-13	11 "	1 "
New Orleans, La.....	Apr. 1-8	5 "	
New Orleans, La.....	Apr. 8-15	18 "	1 "
Shreveport, La.....	Apr. 18	1 case.	Imported from Mexico.
Boston, Mass.....	Apr. 8-15	5 cases.	
Benton Township, Mich.....		Reported present.	
Kalamazoo, Mich.....	Apr. 1-15	5 cases.	
Watervliet Township, Mich.....		Reported present.	
Buffalo, N. Y.....	Apr. 20	1 case.	
Elmira, N. Y.....	Apr. 8-15	1 "	
Cincinnati, Ohio.....	Apr. 1-7	27 cases.	1 death.
Cincinnati, Ohio.....	Apr. 7-14	11 "	
Cleveland, Ohio.....	Apr. 8-15	13 "	
Johnstown, Pa.....	Apr. 8-15	1 case.	
Pittsburgh, Pa.....	Apr. 8-15	3 cases.	
Providence, R. I.....	Apr. 20	1 case.	
Alexandria, Va.....	Apr. 15	1 new case.	
Newport News, Va.....	Apr. 8-13	10 cases.	
Norfolk, Va.....	Apr. 7-12	23 "	
Portsmouth, Va.....	Apr. 7-12	18 "	1 "
Spokane, Wash.....	Apr. 1-8	2 "	

Small-pox—Foreign.

Ghent, Belgium.....	Mar. 25-Apr. 1	1 death.	
Bahia, Brazil.....	Mar. 11-18	3 cases.	1 "
Hongkong, China.....	Feb. 25-Mar. 4	2 "	1 "
Barranquilla, Colombia.....	Mar. 25-Apr. 1	2 "	
Cairo, Egypt.....	Mar. 11-18	1 "	
London, England.....	Mar. 18-25	1 case.	
Tamsui, Formosa.....	Jan. 1-31	2 cases.	
Tamsui, Formosa.....	Feb. 1-28	15 "	
Mexico, Mexico.....	Apr. 1-9	1 case.	6 deaths.
Moscow, Russia.....	Mar. 18-25	22 cases.	8 "
Odessa, Russia.....	Mar. 25-Apr. 1	5 "	
Riga, Russia.....	Jan. 1-31	15 "	
Constantinople, Turkey.....	Mar. 13-20	8 "	
Smyrna, Turkey.....	Mar. 5-12	1 death.	

Yellow Fever.

Vera Cruz, Mexico.....	Apr. 6-13	2 cases.	
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Plague.

Tamsui, Formosa.....	Jan. 1-31	56 cases.	35 deaths.
Tamsui, Formosa.....	Feb. 1-26	125 "	84 "
Tamsui, Formosa.....	Feb. 22-Mar. 8	107 "	63 "

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 8 to April 22, 1899:*

AMES, ROGER POST, Acting Assistant Surgeon, will proceed from New Orleans to Havana for duty.

AUSTIN, R. EMMER, Acting Assistant Surgeon, is relieved at Camp Wetherill, Greenville, and will proceed to Fort Sam Houston to accompany the Tenth Cavalry to Santiago.

BARRY, EDMUND, Acting Assistant Surgeon, will proceed to the Joseph Simpson General Hospital, Fort Monroe, Virginia, for duty.

BRACKETT, JOHN E., Acting Assistant Surgeon, is relieved from the hospital ship *Missouri* and will proceed from Fort Monroe, Virginia, to Washington.

CLENDENIN, PAUL, Major and Surgeon, is relieved as chief surgeon, Second Division, Second Army Corps, and will proceed to Santiago for duty.

EDGAR, BENJAMIN J., Acting Assistant Surgeon, is relieved at Washington Barracks and will proceed to Fort Monroe for duty.

GIBSON, ROBERT J., Major and Surgeon, is relieved at Fort Meade, Pennsylvania, and will proceed to San Francisco for duty.

GROFF, GEORGE G., Major and Brigade Surgeon. The order discharging him is revoked.

KIEFFER, CHARLES F., Captain and Assistant Surgeon, is relieved at Fort Meade, Pennsylvania, and will proceed to San Francisco for duty.

KOERPER, EGON A., Lieutenant-Colonel and Deputy Surgeon-General, is detailed as a member of the army retiring board appointed to meet in Omaha, Nebraska.

M'CALL, JAMES H., Acting Assistant Surgeon, will proceed to Jackson Barracks, Louisiana, for temporary duty. On his arrival, PLUMMER, GEORGE R., Acting Assistant Surgeon, will proceed to Havana for assignment to duty.

M'DILL, JOHN R., Major and Brigade Surgeon, is relieved from Columbia, Havana, and will report to the surgeon general.

M'GEE, ANITA NEWCOMB, Acting Assistant Surgeon, will proceed to Fort Monroe on official business of the medical department.

MANLY, CLARENCE J., First Lieutenant and Assistant Surgeon, is appointed acting assistant quartermaster and acting commissary on the hospital ship *Missouri*, now at Newport News, to relieve WEISER, CHARLES, Captain and Commissary.

PHILLIPS, JOHN L., Major and Chief Surgeon, United States Volunteers, is relieved with the Second Army Corps, and will proceed to Boston as attending surgeon of recruits.

REED, WALTER, Major and Surgeon, will proceed to Havana for the sanitary inspection of the camps, barracks, and hospitals in the vicinity of Puerto Principe, and to report upon the causes of the prevalence of typhoid fever among the troops at that place. Major Reed will return to Washington and make a full report of his investigations.

ROBERTS, FRANK, Acting Assistant Surgeon, is relieved at Camp Near, Port Cabanas, Havana, and will proceed to Washington.

SHAKESPEARE, EDWARD O., Major and Brigade Surgeon, United States Volunteers, will proceed to New York on business of the medical department.

STARK, ALEXANDER N., Captain and Assistant Surgeon, is relieved from command of the hospital ship *Hid* at Fort Monroe, Virginia, and assigned to command the hospital ship *Terry* at Havana.

SWIFT, EUGENE L., Captain and Assistant Surgeon, will proceed to Boston for examination of the Eighth Massachusetts Volunteers, to be mustered out.

THOMAS, HENRY D., Major and Brigade Surgeon, United States Volunteer, will proceed to Fort Sam Houston, Texas, to accompany the Tenth Cavalry to Cuba.

WELL, DAVID D., Acting Assistant Surgeon, is relieved from the hospital ship *Missouri* on arrival at

Havana, and will report to the commanding general of Cuba for duty.

WILCOX, CHARLES, Captain and Assistant Surgeon, is relieved at Fort Bliss, and will proceed to Fort Sam Houston for duty.

WILSON, WILLIAM H., Captain and Assistant Surgeon, is detailed as a member of the examining board at Fort Monroe, *vice* HARTNETT, EUGENE H., First Lieutenant and Assistant Surgeon.

WILSON, WILLIAM H., Captain and Assistant Surgeon, is detailed as a member of the examining board appointed to meet at Fort Monroe, *vice* HARTNETT, EUGENE H., First Lieutenant and Assistant Surgeon, relieved.

WINNE, CHARLES K., Major and Surgeon, is detailed as a member of the army retiring board appointed to meet in Omaha, Nebraska.

WOODSON, ROBERT S., Captain and Assistant Surgeon, will proceed to Fort Clark, Texas.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending April 22, 1899:*

DE LANCY, C. H., Assistant Surgeon. Detached from the *Amphitrite* and ordered to temporary duty at the marine recruiting rendezvous, Savannah, Georgia.

CRAWFORD, M. H., Surgeon. Ordered to duty at the naval rendezvous, Chicago.

TAYLOR, J. S., Assistant Surgeon. Detached from the recruiting rendezvous, Chicago, and ordered to the *Independence* temporarily.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending April 20, 1899:*

WHITE, J. H., Surgeon. To proceed to Savannah, Georgia, for special temporary duty. April 15, 1899.

CARRINGTON, P. M., Surgeon. Upon completion of inspection duties, to proceed to the Brunswick (Georgia) quarantine station, while *en route* to rejoin station at Washington, D. C., for special temporary duty. April 7, 1899.

COBB, J. O., Passed Assistant Surgeon. To proceed to Fort Stanton, New Mexico, for the purpose of establishing a marine hospital at that place. April 19, 1899.

WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Newport News, Norfolk, and Portsmouth, Virginia, for special temporary duty. April 8, 1899.

NYDEGGER, J. A., Passed Assistant Surgeon. To inspect unserviceable property at Wilmington, North Carolina. April 8, 1899.

WICKES, H. W., Assistant Surgeon. Granted leave of absence for seven days. April 8, 1899.

CRIMMING, H. S., Assistant Surgeon. To proceed to Norfolk, Virginia, for special temporary duty. April 8, 1899.

MATHEWSON, H. S., Assistant Surgeon. To inspect unserviceable property at the San Francisco Quarantine Station. April 15, 1899.

VOX EZBOUR, R. H., Assistant Surgeon. To proceed to Savannah, Georgia, for special temporary duty. April 7, 1899.

McCONNELL, A. P., Acting Assistant Surgeon. Granted leave of absence for four days from April 17, 1899. April 17, 1899.

MARSH, W. H., Acting Assistant Surgeon. Granted leave of absence for five days from April 25, 1899. April 18, 1899.

DUDLEY, D. E., Sanitary Inspector. To proceed to the Tortugas Quarantine Station for special temporary duty. April 7, 1899.

LA GRANGE, J. V., Hospital Steward. To proceed to Fort Stanton, New Mexico, and report to Passed Assistant Surgeon J. O. COBB for duty and assignment to quarters. April 19, 1899.

TODT, W. C., Acting Assistant Surgeon. Granted leave of absence for five days. April 17, 1899.

Board Convened.

Board convened to meet at Philadelphia, Pennsylvania, at ten o'clock, A. M., April 18, 1899, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Surgeon H. W. AUSTIN, chairman; Assistant Surgeon M. J. WHITE, recorder.

Appointments.

HILL, E. D., of Massachusetts, appointed Acting Assistant Surgeon, United States Marine-Hospital Service, for the physical examination of keepers and surfmen in the Life-Saving Service at Plymouth, Massachusetts, and vicinity. April 15, 1899.

HOWELL, D. C., of Michigan, appointed Acting Assistant Surgeon, United States Marine-Hospital Service, for the physical examination of keepers and surfmen in the Life-Saving Service at East Tawas, Michigan, and vicinity. April 15, 1899.

Society Meetings for the Coming Week:

MONDAY, May 1st: New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Improvement; Boston Medical Association (annual); St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, May 2d: Association of American Physicians (first day—New York); New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Cattaraugus (annual—Salamanca), Columbia (annual—Hudson), Orange (annual), and Mercer (annual), N. Y.; Hudson, N. J., County Medical Society (Jersey City—annual); Androscoggin, Maine, County Medical Association (Lewiston); Connecticut River Valley Medical Association (Bellows Falls—Vermont); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, May 3d: Kansas Medical Society (first day—Topeka); Wisconsin State Medical Society (first day—Oshkosh); Association of American Physicians (second day); New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the

County of Richmond, N. Y. (New Brighton); Essex, Massachusetts, North District Medical Society (annual—Haverhill); Plymouth, Massachusetts, District Medical Society (annual); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, May 4th: Kansas Medical Society (second day); Wisconsin State Medical Society (second day); Association of American Physicians (third day); New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Medical Society of the County of Orleans (semiannual—Albion), N. Y.; Boston Medico-psychological Association; Ocean, N. J., County Medical Society (Tom's River); Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, May 5th: Kansas Medical Society (third day); Wisconsin State Medical Society (third day); Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, May 6th: Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Births, Marriages, and Deaths.

Married.

BARSTON—THOMPSON.—In Opelousas, Louisiana, on Tuesday, April 18th, Mr. Tracy Barston and Miss Fannie Thompson, daughter of Dr. William Marshall Thompson.

BONDURANT—PRINCE.—In Mobile, on Wednesday, April 19th, Dr. Eugene DuBose Bondurant and Miss Annie Laurie Prince.

BURRELL—CAYFORD.—In Skowhegan, Maine, on Monday, April 17th, Dr. Herbert Leslie Burrell, of Boston, and Miss Caroline W. Cayford.

BEXTON—SHRADY.—In New York, on Thursday, April 20th, Mr. Walter Graeme Bexton and Miss Jeanie Lockhart Shraday, daughter of Dr. John Shraday.

CLEMENS—HEYE.—In New York, on Saturday, April 23d, Dr. James B. Clemens and Miss Marie Antoinette Heye.

RICHARDSON—WOOTTON.—In New York, on Thursday, April 20th, Dr. Charles H. Richardson and Miss Mary Isabel Wootton.

SMITH—MUNGER.—In New York, on Tuesday, April 18th, Dr. Earle Terry Smith, of New Haven, and Miss Georgine Dows Munger.

Died.

CONWAY.—In New York, on Saturday, April 23d, Dr. John R. Conway.

KEMP.—In New York, on Thursday, April 20th, Dr. William M. Kemp.

MARTIN.—In London, England, on Wednesday, April 19th, Dr. John M. Martin, of Boston, in the forty-sixth year of his age.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XVI.

RIGHT TO COMPENSATION.

Right Usually Founded upon Implied Contract of Patient.—It has been observed that a patient impliedly contracts with a physician, when he engages his services or when he receives the physician's professional attention, that he will make a reasonable and proper compensation therefor. The right of the physician to his fee is probably governed in nineteen out of twenty cases by this implied contract. Occasionally, however, there is a special contract superseding the one implied by law, and, probably with still greater frequency, there are peculiar circumstances attending the case which materially affect the contract as ordinarily implied. The implied promise of payment may arise from either one of two circumstances: First, from the employment of the physician to attend the patient, and second, from the mere attendance of the physician and an acceptance of his services, even though not expressly requested.

From the fact that the mere employment of the physician creates a liability for the payment of his fee, it follows that if a physician is sent for to attend a certain patient, and upon promptly responding to the call the physician is informed that another physician is in attendance, or that the trouble is passed, or that for any other reason his services are not required, he will, nevertheless, be entitled to the ordinary and reasonable compensation for making the call.*

The mere acceptance of the services of a physician being sufficient to bind the patient to pay therefor is another sufficient reason for the rule of law heretofore observed, that the physician is entitled to compensation not only for the first visit made at the patient's express request, but also for all subsequent visits which the patient's condition requires.

Right to Compensation for Services of Student.—The physician is entitled to a fee for services rendered by students who attend upon his patients under his directions, and the fact that such students are not legally qualified to practise medicine and surgery in their own names and collect fees for such services does not affect this right.† And so, where a physician employs another physician to assist him, he is entitled to recover for the services of such assistant.‡

Right of Irregular Practitioners to Recover Fees.—One practising an irregular branch of medicine, such as Christian Science, spiritualism, or the like, if not prohibited so to do by the law of his State, is entitled to fees for such services. In the case of *Wheeler vs. Sawyer*, the defense interposed was "that the so-called 'Christian Science' is a delusion; that its principles and methods are absurd; that its professors are charlatans; that no patient can possibly be benefited by their treatment." The court said, "We think this all immaterial. We are not required here to investigate

'Christian Science.' The patient chose that treatment, and received it, and promised to pay for it. There is nothing unlawful or immoral in such a contract. Its wisdom or folly is for the parties, not the court, to determine."*

The question whether or not a physician who has not fully complied with the requirements of the law can recover his fees is treated at length in the following chapter.

Sunday Contracts Valid.—The contract of the physician being construed to be one of necessity and charity, comes within the exception provided for by the statutes, which declare all work done and contracts entered into on Sunday to be unlawful, and therefore the physician is entitled to his regular fees for medical services rendered on that day.†

Amount or Rate of Fee Collectible.—The amount of fee to which a physician is entitled is not a question of law, but is rather one of fact, and is determined by the customs of the locality and by the circumstances of the particular case. In many localities one dollar is the regular fee for making an ordinary day call, and in such localities the physician would not be entitled to collect a larger fee for an ordinary day visit without a special understanding, for customs of this sort may assume the force and effect of unwritten laws; in other localities custom allows a larger fee. It is presumed, however, that the rate of fees is based upon the condition existing in the particular locality, and that a careful examination and comparison of the rates of fees and of the conditions of their respective localities will show a wise and equitable adjustment of the question throughout the country. What constitutes a visit may also be regulated by custom. If a visit is required to be prolonged beyond a certain period, custom may establish the practice of charging extra for all time expended beyond the limit fixed, or a physician may establish such a custom for himself by generally announcing it among his patients. His right to the added compensation would at first, however, be dependent upon the announcement of his special terms to the particular patient, and this announcement would, if acted upon, be equivalent to a special contract for such increased fee. But after the custom became generally known and recognized no special notice would be required to fix the liability upon the patient.

The fees for performing operations are also subject, to a certain extent, to customs; there are, however, many operations of an unusual character which from the nature of the case can not be provided for by customs. Many operations being of a difficult character, it becomes advisable often to acquire the services of a surgeon specially skilled in that line of work, or specially qualified to perform the particular class or kind of operation. The services of such men are not, and can not be, subject to the customs prescribing the rate of fee in the particular locality in which the services happen to be rendered. Also, a physician who is called from a distance because of his special fitness, or for other reasons, may collect for such services, basing the amount of his fee upon the rate customarily charged by him and not upon the rates charged at the place where he visits the patient.

Where, however, a physician is called from a distance

* See *Barlett vs. Spickman*, 95 Mo., 126; *Whendley vs. City of Covington*, 11 Bu-b, 18.

† *People vs. Monroe*, 4 Wendell, 290.

‡ *Jay County Commis. vs. Brewington*, 74 Ind., 7

* *Wheeler vs. Sawyer* (Me.), 15 A. Rep., 67; 6 N. Eng. Rep., 826. See, however, *N. Y. Med. Jour.*, March 11, 1899, p. 347.

† *Smith vs. Watson*, 14 Vt., 332; *Aldrich vs. Blackstone*, 128 Mass., 148. See *N. Y. Med. Jour.*, March 4, 1899, p. 314.

to see a person either on business or social matters, and while there attends him professionally, he is not entitled to the same compensation as though he were summoned to attend him professionally; in the latter case he would be entitled to a greater compensation based upon the loss or abandonment of home practice, while in the former case he would merely be entitled to a compensation for the time spent in attending the sick person professionally, and perhaps for the expenses of the trip. The allowance or disallowance of the last item would depend very much upon the circumstances of the case.*

Upon the same principle it has been held that where a physician lives at his brother's house as a member of the family, he is not entitled to compensation for uninterrupted medical attendance and services during the entire time of the brother's sickness. In this case Justice Hanna said: "The testimony shows that the claimant, while he attended his brother, the decedent, did not devote all his time and attention to his patient, but that he acted as a member of the family, sleeping and taking his meals in the house, going out and returning at his pleasure; and though, no doubt, he rendered many kind, thoughtful, and affectionate attentions to his suffering brother, yet they formed no part of his duties as a physician, and can not after the death of that brother be made the basis of pecuniary compensation. The most the claimant is entitled to is to be paid for the professional visits made, and the number of operations performed by him, at the usual rate of practising physicians." †

The supreme court of Louisiana has held that a physician's charges against an estate for services rendered to the deceased are not to be based entirely upon the physician's skill and the character of the services, but that the ability of the state to pay for such services should be considered in determining the amount of the fee. In this case the deceased had stricture of the œsophagus, probably cancerous in its nature. He could not be fed through the mouth and artificial means had to be resorted to. The purpose was for a time accomplished by inserting a flexible tube through which liquid nourishment was given him, but this means soon failed, the stricture becoming complete and rigid. The physician then resorted to the operation of gastrotomy, after which the patient survived twenty-one days, having been under the care of the physician for a period of sixty days. The physician rendered a bill of \$2,500. The supreme court, in considering the amount of the fee, said: "The physician should be paid, but the charge is disproportionate to the man's estate and condition in life. His estate is inventoried at \$8,705. The lower court allowed five hundred dollars. We increase it to one thousand dollars." ‡

Courts have, however, repeatedly held that the rate of fees chargeable by physicians is in no way affected or altered by the financial circumstances of the patient. This is undoubtedly the law as applied in suits between physician and patient, but when the claim is being enforced against the estate of a deceased patient, as in the above case, then the court may be more disposed to follow this precedent.

A recent case which may well illustrate the impossibility of laying down a fixed rule for the regulation

of professional fees in surgical cases, or cases requiring unusual or peculiar skill and ability, is that of *Heintz vs. Cooper*.* In this case, the patient had sustained a compound fracture of the leg and dislocation of the ankle joint. Both bones were broken and protruded through the flesh, and six or seven pieces of the bone were removed. The physician's services commenced July 12th and continued through until October 13th following, during which time plaintiff testified he made about two hundred visits and about seventy of these were for the purpose of dressing the wound; that five dollars to ten dollars a visit when the wound was dressed, and two dollars and fifty cents a visit for all other visits, was a reasonable charge; and that for reducing a compound fracture of the leg, two hundred and fifty dollars to five hundred dollars was a reasonable compensation. On the other hand, the professional evidence introduced by the defendant was that five hundred dollars was a reasonable compensation for all services rendered in the case. The jury returned a verdict for seven hundred and fifty dollars. Upon the appeal of this case, Justice Haynes said: "It appeared, however, that in no case in Monterey County within the knowledge of the medical witnesses had so large fees, in the aggregate, been paid in case of compound fracture, though in none of the instances mentioned was the character of the fracture or the number of visits stated; and it is now contended on behalf of appellant (the patient) that the prices so paid in those other cases in that county determine what is a reasonable compensation for plaintiff's services in this case, or, as counsel stated it, 'the usual price at the time and place of performance is the rule.' The cases cited in support of this proposition relate to ordinary services, as to which there is a reasonably uniform established rate of compensation, and not to professional services, where the skill and learning of the person, as well as the almost infinite variety in the character and circumstances of the subject upon which he devotes his services, precludes the establishment of any fixed rate of compensation which could be applied to more than a very restricted class of cases and the more common class of services."

In short, the amount of the fee which a physician and surgeon is entitled to charge is governed, in the case of ordinary and usual services, by the generally recognized customs prevailing at the time and place where the services are rendered, or, if he is called from a distance to perform such services, then by the custom prevailing in his locality. But in case of unusual or peculiar services no such general custom will rule; all of the attendant circumstances must be taken into consideration and a fair and equitable amount thereby determined upon. A more definite and certain rule than the above can not be well given.

Consultant's Fee. In case of consultation, the custom seems so well established, that the patient will pay the fee of the consultant, that an agreement between the patient and attending physician that the latter will pay the consultant's fees does not release the patient from paying such fees unless the consultant is informed of such arrangement before the services are rendered. †

Where, however, an attending physician takes another physician to a patient's home to consult, the patient that he is doing all that can be done, and the physician so called in does not do whatever for the patient, and is not, in fact, called in at the patient's

* *Succession of Dickey*, 11 La. Ann., 10th, 6 So. Rep., 798.

† *In re Moffett Est.*, 32 Leg. Int., 218.

‡ *Czarnowski vs. Succession of Zeyer*, 35 La. Ann., 796.

* *Heintz vs. Cooper*, 47 Pac. Rep., 300 (Cal.).

† *Sheldon vs. Johnson*, 40 Ia., 84; *Garrs vs. Stadler*, 67 Wis., 512.

instance or request, the patient is under no obligation to pay him anything.* Nor does it necessarily follow where a patient employs two physicians, who, in fact, meet at his bedside at each call, that each meeting will rank as a consultation. In the matter of Succession of Duclos, the court said: "As to the pretension that, from the moment more than one physician is called in, and attends regularly upon a case, every visit made by every physician employed takes rank as a consultation, it can not be listened to, even supposing that the visits are made at the same hour, so that the physicians actually meet at the patient's bedside. The difference of the charge for what is technically styled a consultation, and for a simple visit, would make it ruinous to most patients and unreasonably onerous to all, to avail themselves of the lights of more than one of the faculty in time of need."†

Failure to Benefit Patient no Bar to Recovery of Compensation.—A consideration of those things which may be urged as defeating the right of the physician to compensation brings us first to the effect of the failure by the physician to benefit his patient. The contract of the physician that he is possessed of ordinary skill and knowledge, and will use due care and diligence in exercising them, does not guarantee his ability to effect a cure in all cases, nor indeed is it an assurance that his services will even be beneficial. If, therefore, the test of a successful treatment is to be considered a prerequisite to the physician's right to recover for such services, it is patent that a new requirement is interposed by the law. This, however, is not the case; it has been laid down as law that if the physician possesses ordinary knowledge and skill and uses reasonable and due care in their exercise, he does all the law requires of him; this proposition is correct, and is therefore applied as a test of the physician's right to recover regardless of the benefit or injury following his treatment. The court well stated the law in a Pennsylvania case in the following words: "The fact that a professional man does not succeed in accomplishing that for which he is employed, can not affect his right to recover for services rendered, unless actual want of skill be specifically shown."‡

(To be continued.)

Pith of Current Literature.

Dry Gangrene of the Thumb due to Carbolic Acid.—

The *Canadian Practitioner and Review* for April states that at a society meeting Dr. Peters showed a case in which the thumb was gangrenous superficially as far back as the metacarpophalangeal articulation. On cutting into it after amputation it was found that the whole of the terminal phalanx, including the bone, was completely necrotic, but the bone of the proximal phalanx had survived, as well as part of the subcutaneous tissue. The skin had become less and less deeply affected as the hand was approached, showing that the cause of the gangrene was some substance acting from without inward, and that it was not due to any vascular thrombosis or embolism, nor to any vasomotor spasm as in

Reynaud's disease. The patient gave a history of having scalded the thumb with a mixture of carbolic acid, salt, and soap, in June, 1898, and denied any contact with the acid since that date. There was very good reason, however, to discredit that history, and to believe that the poisoning was self-inflicted about ten days before the date of amputation.

A Movable Third Kidney.—Mr. Watson Cheyne, F. R. C. S. (*Lancet*, January 28th), records a case in which, on abdominal section, a well-developed kidney was found on the right side of the lower part of the spinal column just at the brim of the pelvis, having its own ureter and blood supply, and distant about from three to four inches from the right kidney, which was felt in the right loin and was apparently of normal size. The hand passed up into the left loin also grasped the left kidney, which was somewhat smaller than the right. In this case the symptoms were no doubt due to the mobility of the kidney and probably to slight pressure on, or kinking of, the ureter.

The literature on this subject appears to be meagre.

The Nature of Chronic Nephritis.—Dr. Albert G. Nicholls (*Montreal Medical Journal*, March) says that in the nephritis that occurs in a chronic disease, as in the case of the constitutional diseases, diabetes, tuberculosis, etc., we have mostly a degenerative process from toxic influences, or a mixed infection. In carcinoma we must look for secondary infection or an intestinal lesion.

The idiopathic or "cryptogenetic" cases are most likely to be of the nature of infections from the alimentary tract, a mere congestion of this tract being sufficient.

The author sums up his conclusions as follows:

1. The different forms of Bright's disease are to be regarded as various stages in the same general process, there being a unity pervading the whole pathological picture. 2. All forms of nephritis are due in the immense majority of cases to infective agents; the acute, to the usual specific germs of the primary disease, and the chronic, as a general rule, to the *Bacillus coli*, though other germs may sometimes be concerned. 3. Acute interstitial inflammation and subsequent connective-tissue hyperplasia are the keynote of the process; this is, however, preceded by parenchymatous degeneration. 4. The point of invasion by the *Bacillus coli* is the gastro-intestinal tract; those of other germs may be various. 5. The liver and mesenteric glands are the first barriers of defense; and the endothelial cells of the capillaries and the secreting tubules of the kidney have the power of ingesting bacteria, this being an attempt at inhibition and elimination.

Syrup of Rhubarb Incompatible with Ergotine.—

The *Settimana medica* for March 25th gives the *Journal de pharmacie d'Anvers* as authority for the statement that syrup of rhubarb precipitates ergotine, no matter by what process the ergotine has been prepared. This is owing to the tannin contained in the rhubarb.

A Modification of Local Anæsthesia by Means of

Cocaine and Morphine.—Ceci (*La Semaine méd.*, February 8; *Medical News*, April 8th) has used with complete success in more than a thousand operations a combination of morphine and cocaine. The morphine is injected some minutes before the cocaine so that its general effect may be felt before the injection of the latter. The dose of the morphine for an old person is

* Schrader vs. Hoover, 11 N. W. Rep., 463.

† Succession of Duclos, 11 La. Ann., 496.

‡ Toolman vs. Loewengrund, 2 W. N. C., 272.

from a third to half a grain, and only one half as much for a young person. The cocaine is dissolved in a three-per-cent. boric-acid solution, so that it shall contain one half per cent. of cocaine. Proceeding in this manner, it is not necessary to obtain complete insensibility, and the amount of cocaine required is very slight. Ceci has, therefore, never had a case of intoxication and has not found it necessary to resort to the method of Schleich, as his own procedure offers all of the advantages of the Schleich method. He has operated upon three hundred and sixty-two hernias by this method, performing the radical cure, and prefers it in most cases to a general anæsthetic.

[These doses of morphine seem to us too large for ordinary use.—Ed. N. Y. M. J.]

Let in the Sunlight.—The *Manitoba and West Canada Lancel* for March says that people who keep their houses dark for fear of the sunlight spoiling their carpets and furniture have no idea of the disease-destroying influence of sunlight and air. Recent experiments made in the Pasteur Institute have shown that bacilli exposed to the sun and air were destroyed in two hours, while those exposed to the sun, the air being excluded, were alive after fifty hours of exposure. Dr. Palermo, of Naples, made an interesting experiment with cholera bacilli. He found that while those protected from the sun killed guinea-pigs in eighteen hours, as usual, those exposed to the sun, although not killed, were rendered entirely harmless. As to the influence of sun and air on bacilli, it was ascertained that the oxygen of the air had a marked effect in assisting the sun's rays, and that the bacteria suffered more from the sun's rays if the supply of oxygen was increased than if it was diminished.

Death from Functional Nervous Disease.—At a recent meeting of the Medical Society of London Dr. Robert Maguire (*British Medical Journal*, April 1st) read a paper upon deaths from functional nervous disease, which he maintained were due to exhaustion of gray nerve matter. In death from senile decay, the condition in which there was the most equal deterioration of the somatic powers, there was nevertheless usually a predominance of failure of one particular system, generally that of the heart, since this organ had no chance of rest. But the system at fault was the highest nervous system. He described four cases bearing upon this point which occurred under his own observation. Dr. Maguire believed that this served to explain the sense of impending death, which, while of no importance in the young and those suffering from very acute disease, was a serious omen in the old and those who had more prolonged illnesses. Similarly, patients in an eastern nation would die if they made up their minds to die, while those of western nations, even though neurotic, had more reserve vitality, and their morbid fears were of less moment. Dr. Maguire said that hints on the pathology of the subject might be obtained from a paper by Dr. Waller, on the Sense of Effort, published in *Review*.

The Relation between Temperament and Character.—Del Greco (*Manicomio moderno*, II, 1898, p. 161, *Journal of Nervous and Mental Disease*, April) divides two general categories for human kind: the physical, or temperament, and psychosocial, or character. A man's inner feelings determine his temperament, his relations to his fellow men, his character. The author holds that from both points of view, man is

neuroses there are well-established variations in both temperament and character which are closely correlated to the neurosis in question; thus he would speak of an epileptic or paranoiac temperament and character. In the criminal there are changes of much the same type, so that while a criminal may not be epileptic nor be a paranoiac, yet he usually possesses a temperament and a character which approach those of the epileptic and the paranoiac.

Hæmorrhage as a Sign of Congenital Syphilis.—Gottheil (*Archives of Pediatrics*, 1898; *International Medical Magazine*, March) calls attention to the importance of bleedings in infants as symptoms of congenital lues. He points out that these may be the only mark of the disease, especially at first; but that they are almost invariably accompanied by a diminution of the coagulability of the blood similar to that of hæmophilia, and that the case usually goes on rapidly to a fatal termination. Disease of the vascular walls is one of the most frequent effects of the syphilitic poison, leading to hæmorrhagic discharges from the mouth, the bowels, the bladder, or the nose; to blood accumulations under the skin and mucosæ, or in the serous cavities and internal organs; or, finally, making the syphilitic eruption itself hæmorrhagic. The author urges the importance of remembering these facts in the treatment of infants who have hæmorrhagic discharges or a hæmorrhagic eruption, the cause of which is obscure.

Green Vision in Tabes Dorsalis.—Mr. Work Dodd (*British Medical Journal*, March 18th) recently reported to the Ophthalmological Society of the United Kingdom the case of an artist, aged thirty-two years, whose sight in 1886 was quite good; in 1891 he had diplopia, from which he recovered. His color vision remained good till 1897, and he complained of defective sight shortly before being seen in July, 1898. When first seen, V. was R. $\frac{6}{60}$, L. $\frac{6}{60}$. He had Argyll-Robertson pupils, optic atrophy, and contraction of his visual fields; his gait was ataxic, and he had occasional trouble in passing water. In September, 1898, V. was reduced to R. $\frac{6}{60}$, L. hand movements. He then saw everything a bright emerald green; it appeared to him as if there was a green veil hung before his eyes, through which he saw everything; he occasionally saw rose-pink spots through the green veil in places. The colors increased in intensity when he was tired, especially the rose pink. He had also occasional sensations of very brilliant light.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of Mar. 1, 1899.

The President, S. ALEXANDER, M. D., in the Chair.

A Combined Obstetric Case and Sterilizer.—Dr. J. CLIFTON FUGAL exhibited a new operation and

When to Operate for Appendicitis; Some Operative Methods.—Dr. ROBERT L. MCGEE read a paper with this title. (See page 380.)

Dr. A. B. JOHNSON's paper had presented many important suggestions and ideas which were

new to him. Some of the statements did not coincide with his own experience. For some time past he had been of the opinion that a surgeon was perfectly justified in advising operation in any case in which there had been one well-marked attack of appendicitis, but he had also been of the opinion that if the attack had passed away in a few days the operation in the interval presented certain advantages. He had always felt that when the operation was done during the period in which the tissues outside of the appendix contained a certain amount of septic material there was an additional risk. He had feared also to use a small incision in such cases, largely because of the danger of overlooking abscesses. He had more often regretted making too small an incision than too large a one. It had seemed to him that the "interval" operation, done by the intermuscular method of Dr. McBurney, afforded a better guarantee against ventral hernia than any other procedure. He had been afraid, however, to use that method in suppurative cases, although he was well aware that it was used by many surgeons. When working through a small incision he felt that he was much more apt to overlook abscesses in the pelvis or in other parts of the abdominal cavity. His surgical technics did not admit of his opening and cleaning out disseminated abscesses among coils of intestine while working through a small incision. The idea that the peritoneum itself could take care of these secondary abscesses without their being properly evacuated and adequate means provided for the subsequent escape of the septic fluid in the abscess cavity was entirely new to him. He did not see why the original focus of suppuration, which might possibly consist of a minute perforation in an appendix, with an abscess surrounding it, should be more dangerous to the life of an individual than an abscess of five times its size situated on the opposite side of the abdomen; the micro-organisms which had produced the one had produced the other, and he could not see why they should be more active in the one than in the other. He had, in his operations, always taken that view into account. Rather than expose the patient to the risk of absorption from such an abscess he had not infrequently made another small incision on the other side of the body in order to secure more perfect drainage. It did not seem to him that the presence of iodine in the urine necessarily meant that the patient was poisoned by iodoform; this reaction could be obtained in cases in which iodoform had been used very sparingly. He had seen a very few cases of iodoform poisoning, but did not recall one in which it had arisen from iodoform gauze in the peritoneal cavity. He quite agreed with the reader of the paper, however, that loose masses of iodoform gauze in the peritoneum were dangerous, and he believed that many fatal cases of so-called intestinal paralysis were really the result of the pressure of gauze on the intestine. For that reason he had recently limited very decidedly the quantity of gauze used in the peritoneal cavity, endeavoring to use it in one thick piece, and to place it superficially, with the idea of furnishing an avenue of escape for any accumulations. Having in view the possible danger of absorption of iodoform, he had lately used only very small quantities of iodoform gauze, and it had usually been conducted down, for instance, to the stump of a gangrenous appendix, or into the iliac fossa, where the fascia was already gangrenous. It seemed to him that the presence of the iodoform did inhibit the growth of the bacteria, or the absorption of their poisonous products. He had

used small quantities of sterilized gauze, not deeply placed, whenever possible. Iodoform gauze was used only for some special and definite purpose. Regarding cases of generalized septic peritonitis, he said that he had come to the conclusion that these were invariably fatal—certainly he had never succeeded in saving one patient, although he had employed various methods of treatment. It should be said, however, that the patients had usually come to him in an almost moribund condition, so that at the time of operation, with every possible means of stimulation beforehand, death had seemed imminent before the opening of the abdomen. He had saved a few in whom there had been a progressive peritonitis of very considerable extent—i. e., abscesses occupying the pelvis, and pus spreading along to the opposite side of the abdomen. The other day he had seen what he had supposed to be one of the evil effects of the use of a number of strings of gauze packed among the intestinal coils. It was a case in which the individual had had a rather acute attack of appendicitis, but in which no pus had been found, and the intestine had presented a fairly normal appearance at the time of operation, although distended. As a precautionary measure several strands of gauze had been packed in among the intestinal coils. Intestinal obstruction had occurred, and it had been necessary to open the wound at the end of forty-eight hours. At this time examination showed that the intestine close to the strings of gauze had become so dark in color and so evidently paralyzed that the intestine was opened and an artificial anus established. The life of the man had been saved, but only with the greatest difficulty. He was not quite prepared to agree with the reader of the paper that a person with appendicitis should be operated upon as soon as the diagnosis had been made, for the reason that he thought the patient ran less risk if operated upon in the interval, and that, if frequently visited and intelligently watched, many cases of appendicitis would subside. Many of these cases often appeared to be spontaneously subsiding when first seen, as shown by the history, together with the signs and symptoms. The "interval" operation could be done in such a way as to provide perfectly against post-operative hernia, and this he did not always feel he could do if the operation were done in the suppurative stage. He was quite willing to admit that the symptoms were not infrequently deceptive, and that some patients had died because operation had been delayed. As long as there was a certain amount of tenderness over the appendix he felt that the surgeon should stand ready to operate at any moment if the symptoms seemed to demand such a course.

Dr. LUCIUS W. HORTENKISS said that he admired Dr. Morris's position in the matter of operation following the diagnosis of acute appendicitis, for it seemed to him certainly logical. Personally, he did not have the courage of his convictions sufficiently to follow this course always. The trouble was that we did not know, in a given case, what course the disease would follow. The position taken by the reader of the paper, while radical, seemed to him thoroughly logical. With regard to the technics of operation, he said that he had himself discarded for a long time past the use of iodoform gauze, and more recently had entirely abandoned gauze packing, using instead the small drainage wicks of gauze encircled in gutta-percha tissue. He had always been of the opinion that cases of true general suppurative peritonitis—i. e., of peritonitis involving every possible

portion of the peritoneal sac—must almost necessarily be fatal. Patients with generalized peritonitis, however, did sometimes recover, but in the treatment it seemed to him that most surgeons would prefer to work through a moderately large incision, as he believed Dr. Morris himself did in this class of cases.

Dr. PARKER SYMS said that he thought Dr. Morris had been the first one to take the radical stand that when a diagnosis of appendicitis had been made, operation should be advised. He was of the opinion that this was the correct position in dealing with this subject. The most dangerous cases were the so-called fulminating ones—in other words, those in which the appendix broke down before the protecting adhesions had formed, and when the first distinct symptoms of the disease might be those which shortly preceded the fatal termination. At the very outset the symptoms might be the same as in an ordinary case of catarrhal appendicitis; the temperature might be almost normal, and the pain insignificant. Just before the occurrence of the rupture the pain might be so slight as to give one the impression that the patient was nearly well. There was a wide range of cases between these fulminating ones and the very mild ones, in which the progress was step by step, and it was easier to follow the course of the disease. In cases in which an abscess was rather slowly formed around the appendix there could be no question that during the most active stage of advancement the operation was more dangerous than a little later. During the twenty-four hours succeeding the perforation of the appendix into protecting adhesions the operation seemed to him a little more dangerous than during the second or third period of twenty-four hours, but it was impossible to say during the first twenty-four hours that some fatal complication might not arise before another period of twenty-four hours had passed by. It seemed to him, therefore, wise, in a case recognized to be a grave one, to advise operation unless there was some specially good reason for deferring operation. It was well to defer operation for a few hours after the patient had been transported some distance, as from his residence to a hospital. He could not agree with Dr. Morris in some of the points that he had made regarding the technics. The disease originated from infection of the peritoneal cavity by pus; the safety of the patient lay in the fact that the abscesses had been localized by adhesions. It therefore seemed rational to evacuate these abscesses very carefully, and in such a way that no pus should contaminate the uninvaded areas. His own practice in such cases was, after exposing the coils of intestine, to have the space between the abdominal wall and the intestine packed with sponges. In this way there was but little chance of leakage into the peritoneal cavity. He then slowly opened the abscesses, having ready a number of marine sponges to absorb the pus, drop by drop, as it escaped. The evacuation must, of course, be done slowly at first. If it was properly conducted, no pus would escape into the wound. He felt firmly convinced that the aim of the surgeon should be to avoid this discharge of pus into the peritoneal cavity; certainly his own results had been excellent, and he had always taken special care regarding this part of the technics. Where the pus was allowed to escape freely among the coils of intestine the surgeon was increasing one source of danger, while he was endeavoring to control the same danger by his operation. The use of hydrogen was useful, but should not be relied upon entirely. It had also been his rule to pack in the pus

cases. His plan was to place a well-folded piece of five-per-cent. iodoform gauze down into the seat of the abscess cavity around the appendix site. A loose packing was used around the margins where the intestine was not attached to the parietal peritoneum. In this way no healthy portion of intestine could come in contact with the contaminated portion. Many authors recommended the removal of the packing at the end of twenty-four or forty-eight hours, but he believed that it was very important that it should not be removed until the fifth day, and then only those portions which came away easily and freely. In some cases the adhesions might be sufficiently firm at the end of two or three days; in others, they would not be sufficiently strong for four or five days. As to the removal of the appendix where there was a circum-appendicular abscess, it seemed to him to depend entirely upon the situation of the abscess, or rather its accessibility. It had seemed to him unwise to tear up adhesions and run the risk of the escape of pus from a localized abscess into the general peritoneum. For this reason, in a certain proportion of cases, he made no prolonged attempt to remove the appendix after rupture had occurred. He believed that the surgeon was not warranted in feeling that he had ever cured a case of true general peritonitis. It might be possible occasionally for such a case to end in recovery, but such a termination should not be credited to any form of treatment; it was rather a resurrection from the dead.

Dr. FREDERICK HOLME WIGGIN congratulated Dr. Morris on his very successful results. In his own experience, he said, he had never yet been able to save a person with general septic peritonitis. He had tried in a number of instances the method advocated by Dr. Finney, of the Johns Hopkins Hospital—viz., taking out the abdominal contents and wiping off the coils—but this had not prevented the usual fatal termination. He would prefer in such cases to follow the technics described in the paper, using peroxide of hydrogen, followed by irrigation with saline solution. His experience regarding gauze in the abdominal cavity had corresponded exactly with that of Dr. Morris, and he had accordingly long since discarded it.

Dr. R. J. WILSON said that the reader of the paper had mentioned a class of cases characterized by a lymph liquefaction, and he would like to ask whether cultures had been made in these cases, and if so, whether he had found that this lymph liquefaction had always been due to one micro-organism. This might have an important bearing on the question of exact diagnosis, as well as on the post-operative treatment. For if the streptococcus was found in pure culture in such a case, the patient might derive considerable benefit from the use of anti-streptococcus serum, or at least give evidence as to its value.

Dr. JOHNSON explained that he did not make, even in these severe cases, an incision into the peritoneum more than three inches in length, although the skin incision might, in some instances, be twice as long.

Dr. MORRIS said, regarding removal of pus collections from the peritoneal cavity in cases of wide infection, that he had apparently been commonly misunderstood, he had had in mind the case of purulent peritonitis characterized by a quantity of septated, thin, greenish fecal matter, spread over various parts of the peritoneum in the form of collections. In such a case it was his practice to remove the chief toxin by suction of fluid, and trust to leucocytosis, which was usually present, to take

care of the septic lymph or pus still remaining on the peritoneal surface, instead of wiping or flushing it off. He used the inch-and-a-half incision in most of his "interval" cases, and many of the acute infective cases, but he often used an incision three inches in length in the severe suppurative cases. He cared nothing about rules regarding the length of incision, but had fixed certain lengths in order to attract the attention of surgeons who were making unnecessarily severe surgery of their appendix work. He had stood under fire for this, but his object had finally been accomplished. In the case of widespread septic infection, the incision he used was usually three inches long, although in several instances he had made it even longer. Regarding interval operations, he said that if patients all reached the interval there would be no occasion to operate early to save life. He had tried this plan at one time a good deal, but had met with some surprises in the form of pyelophlebitis and rupture of the appendix in apparently mild cases. He had then taken a firm stand, and had adopted the rule, against his own inclinations, that operation should be the rule as soon as the diagnosis had been made. The very painstaking practice of Dr. Syme was one which appealed to most surgeons, but he objected to it on the ground that he believed leucocytosis could do better than the surgeon in managing pus which had escaped. The leucocytosis was present, and the multinuclear leucocytes were thickly massed in the peritoneum in these septic cases. As a result of prolonged observation he had adopted the plan of paying no attention to this escape of pus, and did not see any peritonitis or septicæmia following this apparently careless practice. The position was a radical one, but was based on extensive experience, and could be relied upon if the after-treatment was proper. Of course, it would not do to give the patient morphine, but if hygroscopic salts were injected into the intestine and the great lymph sac was given an opportunity, with the help of the osmosis thus induced, to dispose of these toxins, the surgeon could safely neglect the escape of pus, and could save much precious time in operating. It was well from time to time, while operating, to inject peroxide of hydrogen, followed by salt solution, as each abscess cavity was opened. A number of surgeons in this city had told him that they were "almost persuaded" on this point, but so far they had feared to adopt the practice. Dr. Clark, of the Johns Hopkins Hospital, had shown by his statistics that he had been able to pursue, with safety, a still more radical method, which involved the closure of the abdominal cavity in cases in which almost every surgeon would feel it must be drained. Finney's method of evisceration was one which he was at present especially trying to combat, and he was very sorry to see that it was gaining ground in some places. This free manipulation of the intestine was something that a well man could hardly stand, then why adopt such a murderous and unnecessary method for a patient who was desperately ill? He had had many cultures made by several bacteriologists from his appendicitis cases, and had kept records of the results. According to his recollection, it might be stated, in a general way, that where the lymph had been liquefied, the colon bacillus had been almost always present in pure culture.

Surgical Histories in our Hospitals, with Presentation of a Series of History Blanks. Dr. A. B. JOHNSON presented a communication on this topic.

Dr. ALEXANDER LAMBERT said that the reader of

the paper deserved the thanks of the society for calling attention to the value of such data, and for making his hearers realize their lost opportunities in the past.

Dr. J. CLIFTON EDGAR said that the most valuable part of these forms seemed to him to be the suggestions contained in the printed blanks regarding the way in which the clinical histories should be recorded. For the last nine or ten years he had been in the habit, in the maternity hospitals, of putting in parentheses certain suggestions as to the data which he specially desired to have recorded. In a vast subject like surgery, of course, such a plan would not suffice, and the idea of Dr. Johnson of having all the suggestions on one sheet for each region seemed to him especially novel and important.

Dr. J. H. WOODWARD said that this scheme was worthy of much commendation, but inasmuch as both the internes and the attending surgeons of our hospitals were overworked, it would seem well to secure the appointment to each hospital division of a person whose sole duty it should be to take charge of the histories in that division.

Miscellany.

An Undefended Suit for Malpractice.—On April 12th there appeared in the newspapers the announcement that Dr. Thomas H. Manley, a well-known surgeon, had been sued by a woman for two thousand dollars for alleged malpractice in the resection of a joint of the thumb, and that no defense had been made. It appears that a complaint had been served on Dr. Manley early in February in connection with this case. This he answered himself by a communication, and he thought nothing further of it until he was startled by the above-mentioned announcement. A motion has now been made to reopen the case, and in due time a proper defense will be made in the courts. This case is of unusual interest to the medical profession, inasmuch as it was that of a charity patient and, further, that it shows the importance of always referring communications relative to alleged malpractice to a competent legal adviser.

Alcoholism in Children.—At a meeting of the New York Neurological Society held on April 4th Dr. George W. Jacoby presented a little boy, four years and a half old, exhibiting symptoms which in the adult would at once lead to a diagnosis of alcoholic paralysis. In spite of the tender age of the patient this case was indeed one of alcoholic paralysis. When the child was first seen, on February 20th, it was stated that he had been well up to four weeks previously, at which time he had had severe colic without vomiting or constipation. Then the left knee joint had become swollen. Eight days previously he had been noticed to be unsteady in walking. It was found that the boy had received from a half to a full tumblerful of beer daily ever since the age of six months. Examination revealed extensor paralysis of the hands and legs, with a reaction of degeneration in all the muscles. The extensors of the thighs were unaffected, and there was no sensory disturbance. The speaker quoted some recent statistics regarding the habitual use of alcohol in a large German city. The municipal authorities had undertaken an

investigation among the school children, and had found that, of a hundred children, sixteen drank no milk. Twenty-five per cent. of the children had never tasted brandy, but had habitually drunk beer or wine. Eight per cent. had received their daily portion of brandy, "to make them strong." He thought there was an almost equally large percentage of children among the German and Irish population here who were habitually given alcoholic drinks. This case, he said, emphasized the cumulative effect of small doses of a poison long continued.

Dr. William M. Leszynsky said that eight or nine years ago he had reported a typical case of multiple neuritis occurring in a child, about six years of age, who had been given beer and whisky by its parents, in order to make it strong. He agreed thoroughly with Dr. Jacoby regarding the prevalence of this vicious habit in this country.

Dr. Joseph Collins said that he had had two such cases under observation within the last two years. One of the patients, a child of seven years, was now passing through the second attack. This child had been in the habit of drinking beer. He had not completely recovered his muscular power when the second attack came on. The speaker had been impressed with a phenomenon presented by all the cases that he had seen, and it was present in the case just exhibited, namely, the remarkable pallor of the cutaneous surface as compared with the redness of the mucous membranes. In this connection, he remarked, it was interesting to note that Hughlings Jackson had recently recorded himself again in favor of treating chorea entirely by the use of port wine.

The president, Dr. Frederick Peterson, remarked that it was very unusual for an alcoholic neuritis to exist without sensory symptoms.

Dr. Jacoby said that there was intense tenderness over the nerve trunks in his case, but no general hyperæsthesia of the skin.

Specimens from a Case of Erythromelalgia.—At the same meeting Dr. B. Sachs and Dr. A. Wiener gave this demonstration. Dr. Sachs said that this disease had been carefully studied in the past six or seven years. The only autopsy on record was in a case that had been under the care of Auerbach, and it was associated with tabes. There were changes found in the upper lumbar and sacral roots, but it was not shown that the erythromelalgia was dependent upon central disease. Mitchell and Spiller had recently observed a case in which it had seemed to them that the nerves were more involved than the blood-vessels. The specimens now shown had been taken from a man, thirty-six years of age, who had first been seen in 1898. At that time, when the part was pendulous a few minutes, there was a violet color of the foot and ankle, associated with severe pain and tenderness. A few months later a gangrenous ulcer formed on the dorsum of the foot. There was marked atrophy of the anterior tibial group of muscles. Owing to the rapid spread of the gangrene, it had been considered necessary to amputate through the thigh. According to Weir Mitchell, there was no gangrene in cases of erythromelalgia, and the disease was asymmetrical, but in this case the appearance had been typical before the occurrence of gangrene, and, moreover, slight gangrene had been reported by others. Marked arterial changes were found in this case, particularly in the larger branches of the popliteal artery. This in itself

seemed to be a sufficient justification for Dr. Gerster's opinion that the amputation should be done above the knee. The symptoms seemed to be explained by obliterating endarteritis. The changes in the nerves were so slight that Dr. Sachs looked upon them as secondary. It was interesting to note in this connection that there were at the Montefiore Home several cases of cardiac disease and marked arterial sclerosis presenting the principal symptoms of erythromelalgia. There was an interesting analogy between erythromelalgia and Erb's description of intermittent claudication.

Dr. Wiener said that specimens of nerve, skin, muscle, and connective tissue had been given to him for examination, and in not a single one were the arteries normal. Only in the distal portions of the peripheral nerves could any distinct changes be found, and they were rather degenerative than inflammatory. In all the specimens a very prominent feature was the enormous quantity of connective tissue. He had not been able to find a single case on record in which arterial changes had not been found, whereas cases had been reported in which there had been no changes in the nerves.

Dr. Ira Van Gieson said that in this case the vessels were affected to a somewhat greater extent than in the Mitchell-Spiller cases. The specimens showed plainly the predominance of the arterial changes.

Dr. C. L. Dana said that this case differed essentially from the typical ones described by Weir Mitchell in the occurrence of gangrene, and hence it was possible that the histological appearances were not exactly those found in the classical cases of erythromelalgia. Two cases of erythromelalgia were cited in which the urine had contained sugar, and the patients had improved greatly under appropriate dietetic treatment. This seemed to suggest that there might be an underlying diabetic or gouty state leading to neuritis or disease of the blood-vessels.

Dr. William H. Thomson spoke of cases of pseudo-erythromelalgia occurring in exophthalmic goitre and in allied cases characterized by persistent tachycardia. He had seen at least ten, and felt sure that when severe they might be very readily confounded with true erythromelalgia.

Dr. Leszynsky remarked that two years ago he had seen a case of acromegaly in which erythromelalgia had attacked the upper extremities.

Dr. Stieglitz spoke of a case of typical erythromelalgia which he had seen about two years ago in a drug clerk. After a few months there had developed attacks of local asphyxia in the toes, associated with severe pain. Under rest in bed and the use of the iodides the improvement had been decided. Aside from the features mentioned there had been present all the classical symptoms described by Weir Mitchell; yet, if the case had been allowed to go on unchecked, he was confident, gangrene would have developed.

Dr. Sachs insisted that the case had been a typical erythromelalgia for several months, and that the gangrene had developed at a very late stage. The fact that it occurred in a man of thirty-five years, apparently healthy in every other way, was very interesting. The man had recovered very satisfactorily from the amputation, and the pain had entirely disappeared.

Temporary (Exhaustive) Paralysis in Epilepsy.—

At the same meeting Dr. L. Pierce Clark, who had prepared a paper on this subject, presented it only in ab-

stract, owing to the lateness of the hour. An analysis of the cases reported in his paper was as follows: Cases of local exhaustion with general seizures, six; cases of paralysis at the beginning and becoming to a certain extent permanent, two; cases of exhaustion paralysis in infantile cerebral palsy cases, five; cases of exhaustion paralysis associated independently with cerebral palsy cases, but on the opposite side to that of the organic lesion, one; cases of exhaustion manifest in aphasia only, two. His conclusions were that the theory of exhaustion paralysis had been conclusively proved by physiological experiment, and that exhaustion paralysis, generally limited to the parts participating in the spasm, was confined to those parts most convulsed in general seizures. There might be exceptions to this general rule. The transient paralyses might, after a time, become permanent hemiplegias. Temporary exhaustion paralysis was essentially exhaustion of cerebral centres, and the frequency or severity of the muscular spasm was not a fair index of the amount of exhaustion of these centres. A careful study of exhaustion phenomena suggested that epilepsy was clearly allied to paralytic states, due allowance being made for the fact that the epileptic brain did not possess the normal capacity. The great frequency of epilepsy as a symptom following the track of most cerebral lesions of a transient nature tended to substantiate the clinical hypothesis of the close association of epilepsy and paralysis. Minute disseminated patches of sclerosis in different areas of the epileptic brain had been repeatedly demonstrated by various observers, and this also helped the hypothesis very strikingly. In not a few instances he had produced apparent epileptic seizures by massage.

Dr. Dana said that the photographs presented in connection with this paper gave a more graphic representation of the epileptic convulsion than any others he had seen. They should prove very helpful to teachers. He thought that when neurologists were able to make a closer study of the clinical phenomena of epileptic seizures they would be in a better position to localize the disorder.

Dr. Sachs expressed the hope that the paper would be presented in full at a future meeting.

Dr. Ira Van Gieson said that the theories of epilepsy did not seem thoroughly satisfactory, and one of the advantages of a place like the Craig Colony was the opportunity afforded for close and prolonged study. He predicted that in these cases there would be found evidence of an abnormal expenditure of energy in the cortical motor cells. In one case which he had studied, that of a patient in the City Hospital, who had had sixty seizures in one day, there had existed some unmistakable evidences in the ganglion cells of the expenditure of energy. He thought the metaplasia granules were the hitherto unrecognized evidence of this expenditure. In inveterate cases of epilepsy these granules would be found in the interior of the nerve cells and elsewhere.

The president said he had seen two or three cases of hemiplegia coming on during epileptic attacks, and it had been permanent.

Dr. Clark said that he had seen about forty cases of exhaustion paralysis, and the duration of the paralysis had varied from forty seconds to two or three weeks.

A Bad Bite.—The *Bristol Medico-chirurgical Journal* for March tells us that the house surgeon of a London hospital was attending to the injuries of a woman

whose arm had been severely bitten. As he was examining the wound he said: "What sort of animal bit you? This is too small for a horse's bite, and too large for that of a dog." "Oh, sir," replied the patient, "it wasn't an animal. It was another lady."

A Synopsis of Medico-sanitary Legislation passed in Illinois, by the Forty-first General Assembly, which adjourned on April 14, 1899.—1. An act to establish a State colony for epileptics, the object of which is to secure humane, curative, and scientific treatment and care of epileptics.

2. An act to provide for the appointment of a State food commissioner and to define his duties and fix his compensation, and to prohibit and prevent adulteration, fraud, and deception in the manufacture and sale of articles of food. Under this act it will be the duty of the commissioner to enforce all laws that now exist or that may hereafter be enacted in the State regarding the production, manufacture, or sale of dairy products or the adulteration of any article of food, and, personally or by his assistants, to inspect any article of food made or offered for sale within the State which he may, through himself or his assistants, suspect or have reason to believe to be impure, unhealthful, adulterated, or counterfeited, and to prosecute or cause to be prosecuted any person or persons, firm, or firms, corporation, or corporations engaged in the manufacture or sale of any adulterated or counterfeited article or articles of food which are contrary to the laws of the State.

3. An act giving the State board of health supervision of all lodging houses in cities of one hundred thousand inhabitants or more. Under the provisions of this measure it will be unlawful for more than six persons to occupy the same room for sleeping purposes at the same time in any such lodging house, and no room in such lodging house shall be occupied for sleeping purposes which does not contain four hundred cubic feet or more of space for each one of the persons sleeping therein at the same time. Any person or persons violating any of the provisions of this section will be adjudged guilty of a misdemeanor and be liable to a penalty not exceeding one hundred dollars. Any landlord, keeper, manager, or clerk of any lodging house who willfully or knowingly aids, counsels, advises, or permits any person to do any act in this section constituted an offense will be deemed guilty of a misdemeanor and will be liable to a penalty not exceeding one hundred dollars and not less than twenty-five dollars.

4. An act to amend "an act concerning corporations," which provides that the attorney-general may file a bill in chancery, in the name of the people of the State, against any corporation authorized to confer degrees, diplomas, or other certificate or certificates of qualification in the science of medicine, pharmacy, or dentistry, which conducts a fraudulent business or abuses or misuses or violates the terms of its charter, in any court having jurisdiction of the corporation and subject matter of such bill, for an injunction to restrain said corporation from conducting its business fraudulently or abusing, misusing, or violating the terms of its charter, and also for the dissolution of said corporation, and thereupon it will be the duty of the court in which said bill is filed to grant such injunction and to hear and determine the same as in other cases in chancery. The enforcement of this law will summarily put an end to the operations of the "diploma mills" which have disgraced the State for many years.

5. An act to regulate the practice of medicine in the State and to repeal all previous laws. This measure, which if signed by the governor goes into effect July 1, 1899, provides for the examination and licensing of persons who desire to practise medicine and surgery in all their branches, for those who desire to practise midwifery, and for those who desire to practise any other system of treating human ailments who do not use medicines internally or externally and who do not practise operative surgery.

Applications from candidates who desire to practise medicine and surgery in all their branches shall be accompanied by proof that the applicant is a graduate of a medical college in good standing, as may be determined by the board, provided that graduates of legally chartered medical colleges in Illinois in good standing, as may be determined by the board, may be granted certificates without an examination.

Examinations may be made in whole or in part in writing by the board, and shall be of a character sufficiently strict to test the qualifications of the candidate as a practitioner. The examination of those who desire to practise medicine and surgery in all their branches shall embrace those general subjects and topics a knowledge of which is commonly and generally required of candidates for the degree of doctor of medicine by reputable medical colleges in the United States. The examination of those who desire to practise midwifery shall be of such a character as to determine the qualification of the applicant to practise midwifery. The examination of those who desire to practise any other system or science of treating human ailments shall be of a character sufficiently strict to test their qualifications as practitioners, provided that those who are authorized to practise other systems can not use medicine internally or externally, or perform surgical operations, and that only those who are authorized to practise medicine and surgery in all their branches shall call or advertise themselves as physicians, or doctors; provided, further, that those who are authorized to practise midwifery shall not attend other cases than those of labor.

The fees for examination and for a certificate shall be as follows: Ten dollars for examination in medicine and surgery and five dollars for a certificate if issued; five dollars for an examination in midwifery and three dollars for a certificate if issued; for all practitioners, ten dollars for an examination and five dollars for a certificate if issued.

The State board of health may refuse to issue the certificate provided for in this act to individuals who have been convicted of the practice of criminal abortion or who have by false or fraudulent representation obtained or sought to obtain practice in their profession, or by false or fraudulent representation of their profession have obtained or sought to obtain money or any other thing of value, or who advertise under names other than their own, or for any other unprofessional or dishonorable conduct, and the board may revoke such certificates for like causes.

Any person shall be regarded as practising medicine, within the meaning of this act, who shall treat or profess to treat or operate or prescribe for any physical ailment or any physical injury to or deformity of another. This section does not apply to any person who ministers to or treats the sick or suffering by mental or spiritual means.

The examination of those "who desire to practise any other system or science of treating human ailments,"

who are not permitted to call or advertise themselves as physicians, or doctors, or to use medicine or perform surgical operations, will probably be in the following branches: Anatomy, physiology, chemistry, histology, pathology, bacteriology, and hygiene.

A bill to regulate the practice of "osteopathy" in the State passed the senate, but died in the house. This bill provided that the State board of health should issue certificates of qualification to persons presenting diplomas from legally chartered "osteopathic" schools, said certificates to be conclusive as to the right of the lawful holders to practise "osteopathy" in the State. The bill provided, further, that the system, method, and science of treating diseases of the body commonly known as osteopathy was declared not to be the practice of medicine or surgery. It will be remembered that an "osteopathic" bill passed both branches of the legislature in 1897, but was vetoed by Governor Tanner.

The Small-pox Situation in New Orleans is rapidly improving. At present only thirty-eight patients with the disease remain in the hospital. The total number of cases up to the date of our correspondent's letter is one hundred and seventy-nine. Only seven white people have contracted the disease. The death-rate has been unusually low, only three having died. All the subjects of the disease in the city at present are confined in the small-pox hospital.

The Food, etc., of the Troops in the Philippines.—James Creelman, the war correspondent whose experience includes the Chinese-Japanese and Turko-Grecian wars, writes thus from Manila to the *New York Journal*: "All sorts of wild rumors about corruption in the customs departments and about excesses by our troops have been lying about in the English press of Asia. I have investigated these matters, with the assistance of experienced and impartial men, and I find the stories absolutely false. Whatever faults General Otis may have, he has certainly proved himself to be honest and painstaking and capable of preventing malfeasance or corruption on the part of his subordinates. The quartermaster's department, under Colonel Pope, and the commissary department, under Colonel Brainerd, are nearly perfect. The men are well clothed and well quartered, and I have eaten better food in the trenches than I got in the hotel at Manila. The beef fed to the soldiers in the firing line from the refrigerator ships is as good as one can find in the average New York restaurants. The discipline of the troops is equal to that of any army in the world. It is astonishing to find volunteer regiments made up of men accustomed to the free individual life of the Western States rivaling the regular army in unvarying obedience and order. The regular officers never weary of praising the volunteers for their courage and steadiness on the fighting line. I have seen a good many armies in the field, but I have never seen such a perfectly controlled, well nourished army as this."—*Army and Navy Journal*.

False "Aids" in Botany. In the department of Botanical Notes, *Science* for April 14th says:

"This is the time of the year when the country is flooded with circulars describing 'all sorts of aids' for use in teaching or studying botany. It must be that these worthless things are bought by ignorant teachers or school boards, for otherwise they would not be advertised so freely. We have before us one of the old-style *Pontederiac* sheets, published by E. R.

Good, of Tiffin, Ohio, which proves that in some portions of our country the botanical world is supposed to have remained absolutely at rest for the past twenty-five or thirty years. As a leaf from quite ancient history in botany one of these sheets is interesting, but as an aid in modern botany it is simply ridiculous.

"From J. M. Olecott, of Chicago, we have another reminder of the past in the form of a perforated sheet of paper called *A System of Plant Study*, which we are told is a sample of the sheets which make up a book 'containing space for mounting and fully describing fifty-one botanical specimens,' and in addition 'full directions for collecting, pressing, mounting, photographing, analyzing, and preserving plant forms and specimens.' Of course, no botanist will have anything to do with such trash, but for the non-botanical it may be well to say that this is *not* the way that botanists make herbaria and describe plants. The pupil who is so unfortunate as to use such an 'aid' will have to unlearn practically everything he learns from it.

"By all odds the worst thing which has come to our attention recently is the *Teacher's Botanical Aid*, sent out by the Western Publishing House, of Chicago, and consisting of twenty-eight charts, about two feet by three, on which are rough copies of many of the illustrations found in the older text-books of botany. The copying has been done by careless or incompetent hands, so that, in spite of the author's statement that they 'will prove a direct aid in teaching drawing,' we are compelled to say that they are not only inaccurate botanically, but quite shocking from the artistic standpoint. The author intends these charts to be used in nature study, so that we are to have our children's time taken up by 'reciting' from these drawings under the impression that they are studying nature. The teachers of nature study who know nature, and 'who have depended for years upon their own resources' (to quote the author's words), will not think of putting these charts between the pupil and nature, but we fear that the unprepared and uninformed may be induced to use them. If the charts were accurately drawn they would be of doubtful value in nature study, but with all their glaring inaccuracies they are worse than useless."

The Dispensary Bill.—The profession of New York State is to be congratulated on the successful result of the long struggle for the enactment of a law which may reasonably be expected to regulate the dispensary abuse, and confine these institutions to their legitimate field of activity—i.e., providing medical aid for the worthy poor. The battle before the legislature between might and right has been a long one, and several medical societies have done yeoman service for this cause, but conspicuous among them, and especially during the closing days of the present campaign, has been the New York State Medical Association, whose committee on legislation, through its chairman, Dr. E. Eliot Harris, has labored in season and out of season to secure the passage of this bill. The successful issue should be an object lesson to the medical profession as to the possibilities of harmonious and united action.

The True Catholicity of Medicine.—The *Western Medical Review* for April—which, by the way, pays us the compliment in the same issue of appropriating *verbatim*, without acknowledgment, the leading article on the Production of Sex at Will from our issue of March 18th—quotes from the *British Medical Journal* a pas-

sage from a story of M. Paul Bourget published in the *Revue des Deux Mondes* for January 15th. We do not remember to have seen anywhere so clearly expressed a statement of the splendid independence of medicine amid the confused warring and jangle of creeds, philosophies, politics.

"What has decided me to take up medicine, strange as it may seem to you, is the need of certitude. My personal tastes would have led me to something more abstract. I should have entered the *Ecole normale* to work at metaphysics had I not read Kant and also Taine's *Intelligence*. It seemed to me that the object of philosophical studies is too doubtful. My mind is, as it were, unhungry and athirst for something positive, indisputable. The natural sciences supply this. I therefore turned toward them; then I reflected. I don't know your state of mind in regard to moral convictions. As for me, my position is that of absolute agnosticism. I am of the opinion that we can not know of certain knowledge whether, to take the simplest formula, there is a God; or, if there is not, whether there is any good or evil, or not; merit or demerit, or not; another life, or not. Nevertheless, one must act. I at least feel the necessity of action, especially since I saw war. I have the impression that I should have on a ship in danger in a storm. It is a shame to take no part in the work, if one is able to do so. I recalled to myself the reasoning of Pascal—you remember, don't you?—about the bet. I said to myself, Which among the natural sciences is the branch which lends itself to a practical use such as can be applied in all hypotheses? It seemed to me that medicine, understood in a somewhat high sense, answered this requirement. In fact, examine one solution and the other. Suppose all the spiritualist theories, nay more, all the Christian theories, to be demonstrated. What is one's duty? To relieve the being who suffers. The doctor does that. Suppose all the opposite theories to be demonstrated, to what is morality reduced? To an instinct which must be recognized and satisfied like all instincts, and which consists in the need of associating ourselves with others, of helping our fellow men, and of being helped by them against Nature, which is our enemy. Who accomplishes this task better than the doctor? He is the altruist *par excellence*. He is right, whatever be the metaphysical postulate which we accept. And this is so true that since the day when I first registered myself as a student and entered the door of the hospital I have felt a kind of calm to which I was before a stranger. It has been borne in upon me that intellectually and morally I have—how shall I say?—had my feet on the ground, that I was walking on something solid. In short, I was no longer in doubt."

Sulphur Fumes and Grippe.—In our issue for March 18th we quoted from the *Georgia Journal of Medicine and Surgery* for February a paragraph recommending the use of fumes from burning sulphur in grippe. The *Southern Clinic* for April reproduces our paragraph and adds this editorial comment:

"Now we would not advise the promiscuous burning of sulphur by patients in their rooms unless there is an able-bodied man on hand to drag them out about the time asphyxiation, strangulation, etc., commences, which is likely to be the case with the average sulphur burner."

The exception seems to us well taken, at any rate so far as the qualifying adjective "promiscuous" is concerned.

Original Communications.

REPORT OF A CASE OF
REMOVAL OF THE GASSERIAN GANGLION
WITH THE SECOND AND THIRD DIVISIONS
OF THE FIFTH NERVE,
HARTLEY-KRAUSE OPERATION.*

By JOHN F. ERDMANN, M.D.,

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IN THE UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE,
ATTENDING SURGEON TO GOVERNOR AND ST. MARK'S HOSPITALS.

THERE are few sufferers from persistent neuralgia of the fifth nerve who sooner or later are not willing to undergo operation after operation for relief of this pain, and even finally subject themselves to the most serious operations, knowing full well that the outcome may be death.

It was one of this class of patients whom it was my fortune, through the kindness of Dr. McIntosh and Dr. Senn, of South Carolina, to see last August. No better history of the case can be given than a copy of portions of the letter Dr. McIntosh sent with the patient:

"Mr. D. P. is fifty-three years old, a farmer living in the country, and leading an active, hard-working, out-of-door life; strong constitution, good family history, no specific history, and is well in every way except his trigeminal neuralgia. For the past three or four years Mr. P. has been a terrible sufferer from this disease, involving, as it does, all three branches of the fifth nerve.

"During the three or four years he has had medicinal all the usual and unusual remedies—has tried electricity (the constant galvanic current) and at times on his own responsibility has used proprietary remedies very extensively, but nothing has given him anything but partial and temporary relief.

"Last December (1897) his suffering was the worst in the skin and muscles of the left side of his scalp and upper face around the left eye, and I cut down upon and excised portions of the supraorbital, supratrochlear, and infraorbital nerves. This gave him considerable temporary relief, lasting three or four months.

"Lately the chief suffering has apparently been with the lingual and ophthalmic branches and, to a certain extent, with the pharyngeal branches. The pain has been so great that for the past ten days he has been totally unable to eat any solid food, and even at times unable to talk. The slightest movement of the tongue would start up a spasm of pain which would shoot back and seem to centre in the left eyeball. He has also had a good deal of pain in the region of the distribution of the auriculo-temporal branch and also of the small occipital and great auricular branches of the cervical plexus. He sent for me in consultation last Sunday, begging me to do an excision of his left eye and cut these painful branches. I told him this would give him only temporary relief, and again urged him, as I had for two years, to have an excision of the Gasserian ganglion done. He finally consented to have this done, and I have referred him to you."

In a parting clause Dr. McIntosh states: "It is only proper to mention that the patient's right eye (the one not involved in this neuralgia) is somewhat defective, having been injured when he was a child. Finally, I have told the patient the possible dangers of the operation, and I think he is fully prepared to undergo them."

I saw the patient on August 4th, about 2 p.m., when, in addition to the foregoing history, these facts were obtained: He had just finished a very fatiguing journey of two days' duration, and, owing to his pain, was unable to obtain any sleep, except by the use of anodynes, and could not take any nourishment, except the very smallest quantity of fluids, as efforts at swallowing caused him agonizing spasms of pain in the left side of the neck, which would extend up the face and centre about the left eye. He did not care to speak for the same reasons. His physician, Dr. Senn, who accompanied him, said that this condition had prevailed for more than ten days, and that it was a usual thing for him to have such attacks, but not so intense. Owing to the agony of the patient, he was immediately prepared for operation for the following morning, Friday. During the shaving of the scalp tears were constantly running down his face, nevertheless he motioned to continue the job and finish it as quickly as possible. A thin green-soap poultice was applied, with orders to remove it and scrub the head and place on a bichloride dressing during that evening. The following morning chloroform was given before the dressing was removed, and it was then found that the scalp was covered with numerous pustules, evidently due to too assiduous attentions in antisepsis. The scalp was washed off and a dry sterile covering placed over it and the patient put in bed. Upon recovering from the anæsthetic his pain was not improved. It was found on the second day following—i. e., August 7th—that the pustules had dried entirely and the operation was then undertaken.

Dr. Louis McLane Tiffany, of Baltimore, says: "The anæsthetic agent in all my cases has been chloroform; the age of the patient, but especially the desire to avoid congestion of the face and head, so often seen with ether, has induced me to choose this anæsthetic." Acting upon the above suggestion, chloroform was given the patient, with a most happy result. No congestion of the face or meninges was observed.

The usual steps of the Hartley-Krause operation were followed throughout. Hemorrhage at the time of the raising of the flap was profuse—in fact, so sudden and profuse that one of the surgeons present suggested compressing the carotid; but the color being dark, I immediately packed the wound with gauze, pushing the tampon well in between the dura and base. Upon removing the tampon in about three or five minutes, hemorrhage no longer occurred. It was also observed that a small nick of the dura had occurred, a few drops of free and profuse flow of cerebro-spinal fluid. This, fortunately, was an accident of no moment, as it was our intention to nick the dura, thereby allowing just such an evacuation to take place, so as to give work to do in the exposed region. The degree of ease with which the brain and dura could be retracted after the evacuation of this fluid was surprising. No effort was made to suture the nick. As the dura was raised from the base, hemorrhage proved a delay in the time occupied, as it was very free and packing was necessary every few minutes. Still,

* Read before the Society of Alumni of Bellevue Hospital, February 1, 1899.

• See *Annals of Surgery*, Vol. XXV, p. 416.

it was thought that the operation could be done in one sitting, although the duration might be unusual (the actual time was an hour and three quarters). The exposure of the second and third branches was exceptionally easy, but difficulty was found in exposing the ganglion, owing to the rather firm adhesion of the dura to the petrous bone. The nerves were cut, the distal ends pushed through their respective foramina, while the proximal ends were seized with a forceps, so that traction could be made in the direction of the ganglion. The ganglion was finally exposed, and, in attempting to remove only the portion connected with the second and third divisions, all apparently was removed, and even considerable of the nerve trunk proximal to the ganglion.

In breaking off the bone flap it became detached from its periosteum and was removed. The muscle and periosteum were sutured with a deep row of catgut, the skin superficially, and a small drain was put in for thirty-six hours. For thirty-six hours a considerable amount of oozing of cerebro-spinal fluid took place. This had entirely ceased at the end of forty-eight hours. The patient, upon coming out of his anaesthesia, refused to remain in bed, but walked about his room and kept up a constant fire of questions and stories, saying no one could keep him quiet, as he had not talked on account of pain for some days; and remarked, "Now I am going to make up for it."

His temperature and pulse were interesting, to say the least, being normal upon the date of admission and previous to date of operation. Four hours after operation the temperature was 100.4° F.; pulse, 96. The patient said he had the same pain in his right side as he had in the left before operation; he manifested a mild delirium. Both were controlled with a single dose of hyosine and morphine.

August 8th.—End of first day. Temperature was 101.6° F.; pulse, 102. Patient appeared delirious; constantly roaming about the room and talking.

2 P. M.—Temperature, 102° F.; pulse, 104. Outside dressings changed; drain removed.

9th.—Temperature, 102.8° F.; pulse, 114. Restless all night.

10th.—Temperature, 100.8° F.; pulse, 86. Feels excellent.

11th.—Temperature, 99.8° to 101.4° F.

12th.—Temperature, 99.8° to 100.6° F. Few sutures removed; skin absolutely healthy. No discharge. No evidence of fluctuation.

13th.—Temperature normal. The patient requested to go home. The wound was absolutely healed, and, as his interests demanded his return at the earliest date, it was deemed safe to discharge him in the care of his physician, Dr. Senn.

The entire left half of his face was free from pain immediately after the operation, also the conjunctiva and cornea. Pain in his neck and post-cervical region had disappeared. He was able to take solid food on the third day and would have done so earlier had he been allowed.

No preliminary suturing of the eyelids was done, but great care was taken to keep the lids closed with a pad of gauze moistened with salt solution. The day he was allowed to return his left eye was sealed up with a watch glass. I am indebted to Dr. Senn and Dr. McIntosh for the history since the patient returned to his home.

It will be observed that the temperature for four days was of such a nature as to lead one in ordinary operation cases to suspect an infection. Had it not been

for the fact of seeing the statement by Tiffany in his last article in the *Annals of Surgery*, vol. xxiv, that "in some cases temperature is high at first, due evidently to basal disturbances involving the heat centres," I am certain that I would have opened the wound on the second or third day. As it was, it required all the courage I could command not to interfere, and, as the temperature began to drop on the fourth day, evidently the wiser course had been pursued.

29th.—Dr. Senn says: "His eye is all right. No taste in the left half of the tongue whatever. Sense of skin contact about the ear and in the flap region, otherwise no sense of pain or contact in the left face."

September 8th.—Dr. McIntosh writes: "The patient is looking much better, having gained from ten to fifteen pounds. Had some peculiar sensations in the face, which are all disappearing."

October 1st.—Word was received that his left eye had been enucleated for corneal ulceration. Dr. McIntosh says: "This would not have been necessary had the patient observed the instructions given him in reference to the care of his eye. But, owing to complete anaesthesia, dust, etc., was blown into the eye and trauma resulted; also he did not report to the doctor until he found his vision affected in the left eye. Otherwise the patient is in an excellent state of health, etc.; no pain, etc."

It will be observed that a period of seven weeks elapsed before corneal ulceration occurred, and it is also noticeable that, four weeks after the operation, while still observing the ordinary precautions about his eye, it was in a normal state.

In looking over the literature it has been observed that corneal ulcerations are usually due to foreign bodies coming in contact with the cornea, and for this reason temporary suture of the lids as a protective agency for a few days is advised. In my case such procedure was not deemed necessary, but a pad moistened with normal salt solution was made to retain apposition of the lids. In addition the eye was thoroughly cleansed every forty-eight hours. No evidence of inflammation or destruction of the conjunctiva or cornea was noticed, and, as stated above, a watch glass was sealed over the eye when the patient was discharged, by this means avoiding trauma from cinders, etc., on his long journey home.

The sense of taste is not lost in all cases, but was noted in this one immediately after the operation. Although with a little care the motor portion of the third division can usually be seen, no attempt was made at a dissection in this case, as the third portion seemed a solid mass, and it was feared that filaments of sensation would be left behind. Naturally, it is advisable to leave the motor filaments, especially if both sides are involved, and also in view of an operation being demanded at a later day on the opposite side.

The question of replacing the bone flap is not so important as would seem at first thought. It has been found necessary on several occasions to reopen the cranium, as in those cases in which but one root was removed, or when the second and third roots were removed and the ganglion. In cases in which the

bone had been replaced some difficulty was met with in the secondary operation, while in several others by Tiffany, in which the bone was not replaced, secondary operations were performed with ease. In Tiffany's cases in which bone had not been replaced it was found that the temporal fascia made an ample protection to the underlying tissues.

The prognosis in these cases sums itself into immediate and remote results. The immediate results are relief or death. Under the former, the question of a partial or complete recovery has to be considered. If the ganglion remains, or is but partially removed, the recurrence has been shown to be more than likely; while, if the entire second and third divisions and their respective portions of the ganglion are removed, complete recovery can be assured. Death as an immediate result has taken place in several ways: *Shock* attending the operation and due chiefly to loss of blood. *Hæmorrhage* being so profuse as to be impossible to overcome its evil effects, although with the methods of saline infusion this latter cause is now rare. Finally, sepsis, with concurring meningitis, due either to lack of cleanliness of the operative field or to the introduction of organisms through the agencies of the fingers, instruments, or dressings.

After the operation there may be *recurrence*, due to incomplete removal or inability to remove the ganglion, as cited in one instance, a case of Dr. Fowler's;* *destruction* of the eye, as cited in the case to-night, due to carelessness on the part of the attendant or patient; *motor paralysis* of the muscles of mastication, due to removal of the motor portion of the third division, this in itself being a serious complication only when both sides are involved; *brain abscess*, resulting from rough handling during the retraction of the brain from the field of operation.

Certainly this mortality rate is not so high but that this method of obtaining relief for so serious an affliction should be advised in all cases, barring the very old and feeble, in which the usual remedies, medicinal and mechanical, have failed, and particularly so if the method of pushing strychnine to its toxic effect, as advised by Dr. Dana, proves unsuccessful.

The rate of mortality has been variously estimated at from 8.7 to twenty-two per cent. The author's collection of seventy-six cases of operation by the Hartley-Krause method by various operators, both American and foreign, gives the following results: Deaths, fifteen; recoveries, sixty-one; mortality, nineteen per cent. plus.

149 WEST FORTY-FOURTH STREET.

An Electric Hot-air Oven.—Dr. R. W. Lovett (*British Medical and Surgical Journal*, April 20th) describes a form of oven heated by electricity for the hot-air treatment of joints. It is said to afford greater comfort than the gas oven.

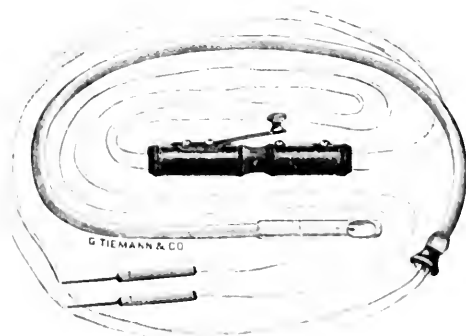
GASTRODIAPHANY IN THE INFANT.*

By HENRY KOPLIK, M. D.,

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GASTRODIAPHANY—that is, transillumination of the stomach in infants—has been hitherto but little employed as a diagnostic measure. True, we find some few attempts in the literature at gastrodiaphany, but they have been made with but little method and no distinct end in view. The instruments employed have been primitive and unsafe for the infant at least. The best work has, so far as the literature is at my disposal, been done by Finkelstein. This author comes to no definite conclusions. Personally, I have felt the need in certain exceptional sets of cases of a safe instrument with which I could make a modified physical examination of the stomach, determine its size, whether it is dilated or not, the situation and, if possible, the condition of the pylorus. Thus far I have been much encouraged, and think we have in gastrodiaphany of the infant's stomach a means of diagnosis which in the hands of the expert will lead to indispensable enlightenment in trying cases. We are favored in the infant by many things not present in the adult. The thinness of the abdominal walls allows of a much more distinct picture than would be possible in the adult. For this reason, and the much more important considerations of employing every known means at our disposal for a diagnosis, I was induced to spend much time and patience in the perfection of the instrument which I wish to describe.

The Instrument.—When I looked around for a model from which to evolve the instrument here presented, I studied the Einhorn instrument and also



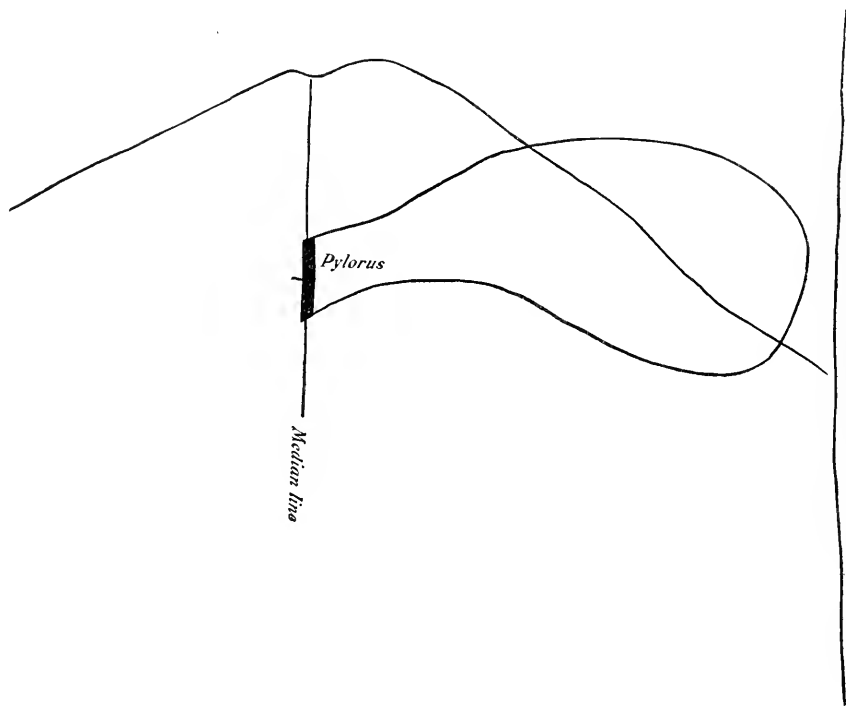
that called the Heumeter instrument. I had at first constructed an instrument which followed the Einhorn model closely, but it was, of course, much smaller. The immediate objection to this instrument was, first, that it was, speaking of infants only, a very unsafe in-

* *Annals of Surgery*, vol. xxiv, Tiffany, Case 32

* Read before the Society of Alumni of Bellevue Hospital, February 1, 1899

strument to use. From this point of view I found that the Einhorn instrument, with its exposed glass bulb at the end subjected to pressure and manipulation in its introduction, might at some time break. The bulb

is smaller in diameter than the metallic portion (five millimetres), and fastened on the metallic portion or head in such a manner that any manipulation will not make tension on the electric wires which run through



Actual size of stomach of an infant six months old with symptoms of pyloric stenosis.

might even come off in the stomach. This would be a serious accident. Then, again, I found that the bulb became overheated; also that the making and breaking of the current could not be made quickly enough, and the whole instrument became quite warm. My instrument presents a very safe form of light, fully protected, like the cystoscope, with a metal cap which protects the glass-work fully and beyond the possibility of breakage. The light, by means of an instantaneous arrangement for making and breaking the current, can not become heated to any degree. It can be run like the cystoscope with an inexpensive dry-cell outfit. It can be introduced into infants of tenderest age.

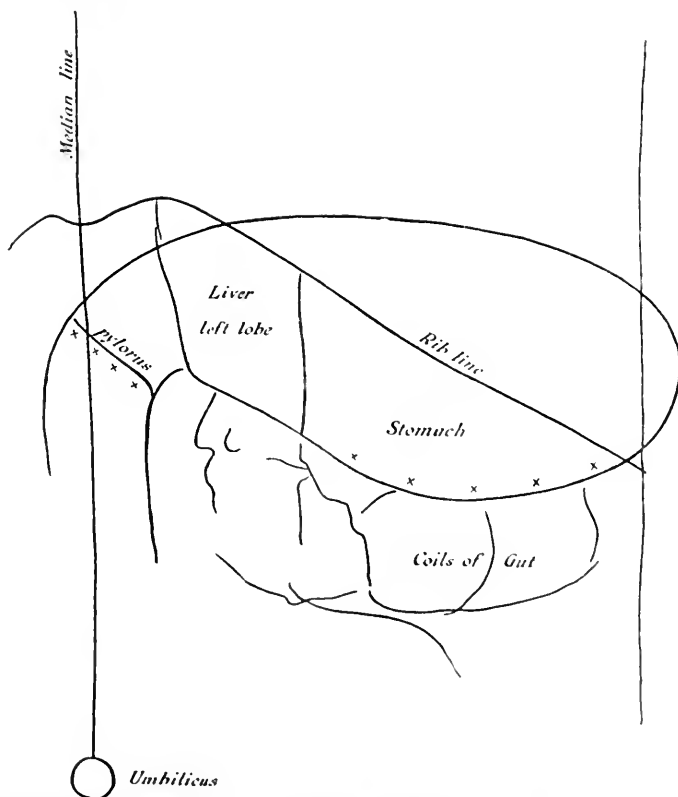
Description of the Instrument.—The instrument which I have devised consists of a metallic head and a rubber catheterlike body. The metallic portion containing the light is exactly four centimetres long (an inch and a half) and six millimetres in diameter. Its size thus is that of the catheter ordinarily used to wash the stomach of the infant. The rubber flexible portion of the instrument is twenty-seven inches long, a lit-

tle smaller in diameter than the metallic portion (five millimetres), and fastened on the metallic portion or head in such a manner that any manipulation will not make tension on the electric wires which run through the rubber portion. The conducting wires are made quite long and run through a handle as in the Einhorn instrument, but differing in that the current is made by means of a spring instead of a sliding arrangement. Instantaneous opening and closure is thus possible and overheating can be avoided. The light is contained in the metallic end of the instrument, which is fenestrated in a manner similar to that of the barrel of a hypodermic syringe. The light which is contained in the metallic portion is a seven-volt light of four-candle power, and is protected by a glass hood inside of the fenestrated portion of the metallic head. The extreme tip of the instrument is rounded off. It will thus be seen that there is nothing about the instrument which ordinary handling can break.

I regard the instrument in its present form as a very useful and practical instrument whose introduction into the stomach does not subject the little patient to the slightest danger or to more inconvenience than the introduction of the tube for washing the stomach. I have found the instrument of use in clearing up the

following obscure set of cases. An infant is brought to the physician with the story that it vomits constantly; it has steadily emaciated. Every time it takes the breast or its bottle the mother says it not only vomits but seems sometimes to reject much more than is taken into the stomach at that feeding. The infant in a majority of cases is ill nourished; in two of my cases exceedingly atrophic. If the infant is bottle-fed it will develop that almost everything has been tried. Examination of the abdomen reveals a very queer state of things in some of these infants. We find coils of gut clearly outlined on the abdomen, and in two of my cases I found to the right side of the median line a constriction between two distended portions of abdominal contents, apparently gut. The peristalsis of the gut is very marked in these cases. These markings of the gut are quite large, and one of them being to the left and just underneath the ribs and the other to the right, separated by a constriction. I

stalsis of the stomach. This is scarcely so. It is increased peristalsis, but of the gut, including the large intestine. The gastrodiaphane in these cases reveals the stomach in an entirely different locality behind these coils. The constant vomiting in these cases is a cause of the increased activity of the gut. The gastrodiaphane in one of my cases showed distinctly a pylorus in the median line as a transverse thickened line, so that it may have been hypertrophied. It showed also this narrow part of the stomach beneath and behind the coils of gut which were forward to it and running transversely. Again, in these cases I found no dilatation of the stomach—that is, in the cases of continual vomiting coming under my care and examination. All of these points are exceedingly useful. The gastrodiaphane will reveal a stomach dilatation in a quicker and simpler way than measuring stomach capacity by means of a graduated funnel. This presupposes that you fill the stom-



Stomach of an infant five months old with symptoms of stenosis. Actual size. * Where the globe of light could be pushed along the greater curvature.

at first took these phenomena as indicating the increased peristalsis of the stomach. Indeed, if we look over the literature of so-called stenosis of the pylorus in infants, we will see this described as increased peri-

stalsis of the stomach. This is not only painful but very unsafe. Again, I have frequently found that a stomach would hold a hundred and fifty cubic centimetres and at another time fully twice the amount, depend-

ing upon the contraction of the stomach and abdominal muscles and the pressure used. I advise against this method. The gastroduaphane is a harmless method of at once ascertaining the general size of the stomach. In all the cases thus far examined I found the pylorus quite constantly in the midline in young infants, and in a few cases behind the liver. As a rule, however, it is found lower down, just beneath the border of the liver. The stomach lies horizontally, with the great curvature beneath the ribs on the left side, the picture unobstructed by the spleen normally.

There are two things which can be quite distinctly mapped out by this instrument; they are the pylorus and the greater curvature.

The greater curvature in very young infants will be found to lie quite transversely, and, the bulb of the instrument being introduced to the bottom of the stomach by careful manipulation, it can be passed along the greater curvature to the pylorus. The light is seen to clearly outline the greater curvature from the outside by the observer as a very bright spot traveling transversely across the abdomen and then upward, stopping at the pylorus. This occurs quite uniformly in the median line. Thus any adjacent illumination of gut is distinctly differentiated and the size of the stomach as shown by the depression of its greater curvature very distinctly outlined.

The instrument, therefore, gives us a means of finding out the exact size of the stomach, and also possibly the condition of the pylorus, whether thickened, broadened, or narrow. Whether the instrument will aid us in diagnosing growths or glands in the omentum or mesentery remains to be seen in the presence of a definite case. Such a case has not yet offered. The operation of gastroduaphany is carried out in a dark room or under an improvised dark canopy or tent.

Method of Using the Instrument and Marking out the Stomach.—The stomach of the infant is washed out, and, when the water returns clear from the catheter, we reintroduce about an ounce of water—the babe lying horizontally on its back—and proceed to the introduction of the instrument. It is introduced much in the same manner as the stomach tube, but in cases of a projecting epiglottis or seventh cervical vertebra it is necessary to guide the head of the instrument by the index finger of the left hand introduced into the mouth of the infant. Great gentleness should be used, as we are introducing a metallic instrument and are apt to scratch the parts if care is not exercised. Once introduced, we carry the instrument down to the great curvature. Electric contact is then made, and the examiner will find exactly the situation of the instrument. With an aniline pencil the stomach can be outlined, as seen in charts, to be recorded by means of tracing cloth laid over the abdomen later on. When electric contact is made, it should be but for short intervals—a few seconds—then broken and then made again. In this manner

the instrument does not become heated. The withdrawal of the instrument presents no difficulties. The instrument thus far has been employed by me as a diagnostic measure in very young infants, below the age of six months. Its limit of usefulness would extend to infants below the twelfth month. Beyond this age the little ones would become so unmanageable that the difficulties of introduction of the instrument and observation would be great. In children the terror of the little ones would warn us not to push matters unless we cared to use an anæsthetic. I doubt the justifiableness of such a procedure. Again, I have made it a point that this instrument should not be used except in extreme cases—cases which ordinarily fall into the hands of the pædiatrist and in which all ordinary means have been exhausted.

NOTE.—The canopy mentioned is improvised by covering the ordinary photographic tripod with an oilcloth, which will exclude light and furnish the necessary dark chamber.

66 EAST FIFTY-EIGHTH STREET.

THE TREATMENT OF SYPHILIS.

By BOLESŁAW LAPOWSKI, M.D.

(Concluded from page 564.)

THERE is one form of syphilis, the malignant stage, when mercury in any form is inadvisable. In such cases iodine preparations alone or with quinine are of great value. Iodine can not be regarded as an indispensable remedy in syphilis, as patients had been relieved from their syphilitic manifestations before iodine was in use. It does not keep off the earlier symptoms nor preclude relapses. But it is of great use in syphilis, and its value is well expressed by Keyes: "No means in the physician's hands place him so near the Deity as the iodide of potassium." The effect it produces is due to the stimulant action of iodine *in statu nascendi* upon the general functions of the tissues.

An organism in a normal condition has only a slight power to free iodine from its salt, but this power is increased in the presence of staphylococci and many other microbes (39); and herein lies the explanation of the indications for the use of iodine salts in syphilitic manifestations—namely, when the products have a tendency to fatty degeneration or to pus formation, as gummata, hypertrophied papules of the early period, or primary ulcers with a gummatus appearance. It is also advisable to give iodine in early syphilitic affections or organs not accessible to a direct examination, for in such cases it is impossible to determine whether the symptoms are due to changes characteristic of the early or late stages of syphilis. Of all the iodine salts potassium iodide is chiefly used; but recently it was suggested to replace it in some cases by iodide of rubidium which is more easily tolerated and less disagreeable to the taste, and by iodylacid (40), which, not so readily giving up iodine to the system, does not so often produce the un-

desirable effects of iodine as the other salts, a fact appreciated by patients who have to take iodine for a long period.

Iodine as administered for therapeutic purposes is not absorbed by the mucous membrane of the stomach, but by that of the intestines (41); consequently, the way of administration which will not postpone the evacuation of the stomach contents into the intestinal canal is the best. For this reason potassium iodide administered in a liquid form and much diluted with water, taken on an empty stomach, right before meals, will best answer our purpose, and by administering iodine in large doses (two to four daily) we will better avoid its undesirable effects than when given in small doses. The disagreeable taste can be corrected by a mint drop in the mouth or by some mint water.

The acute outbreaks of iodism usually appear on the mucous membrane of the respiratory organs, while the skin is commonly affected in cases of long-continued use of iodine, presenting various kinds of symptoms, as acne, purpura, erythema, and pemphigus. Iodine preparations in the early manifestations of syphilis are only indicated in special forms of the early stage, and during the existence of special symptoms, as headache, pains in the bones; while in the late stage of syphilis the administration of iodine is a classical rule of treatment. It is always advantageous, I may say imperative, not to limit ourselves to the use of iodine alone, but also to give the affected system the benefit of mercurial action. This is usually done by administering the so-called mixed treatment.

The combined administration of iodine and mercury is usually arranged in one of the following five different ways:

First, combining the two remedies and administering them simultaneously.

Second and third, giving them separately on the same day, or on alternate days; and

Fourth and fifth, giving a series (eight to ten) injections, and then, after a rest for eight or ten days, administering iodides, and *vice versa*.

Here is a point for consideration:

From clinical observations we have learned to avoid external applications of mercury to an exposed surface of mucous membrane, while iodine is being taken internally, because a toxic combination—bimiodide of mercury—will be formed at the place of contact of the two ingredients, and produce a caustic action upon the surface of the membrane. The same happens if iodine and mercury are used at the same time externally to different parts of the body (42). Is it not possible that a toxic combination of the two chemical elements is formed in the organism when iodine *in statu na. coli* happens to meet mercury? (43). Some clinicians express the opinion that within us this combination does not take place as it does on the surface of the skin.

But this is an opinion, and one not in accord with clinical observations. In view of this, can it not be asked, Are not some effects observed during the administration of the two drugs, usually ascribed either to the action of mercury or iodine, due to the toxic combination of the two drugs?

For this reason the safest way of administering and arranging the mixed treatment will be to administer iodine for a certain period (two to three weeks) and then, after an interval of five or six days, proceed with the mercury, as the iodine will be eliminated by the time the mercury comes in contact with the internal tissues (44).

In some cases the syphilitic manifestations would be greatly influenced by mercury and iodine but for the impaired excretory function of the kidneys.

In such cases we can not follow the usual method of treatment, and we must be guided by indications based upon the condition of this organ. The percentage of kidney affections in syphilitic patients is very considerable, but as, on the one hand, the syphilitic affections of the kidneys can not be symptomatically differentiated from kidney diseases due to other causes, and as, on the other hand, the kidneys may be attacked by syphilis during any of its stages, it is advisable in cases where we find albuminuria or cylindruria occurring simultaneously with an early syphilitic eruption to place the patient under the influence of iodine and abstain from introducing mercury into the system. Potassium iodide, hot-air cabinet baths, and special attention to the diet will suffice, until the improved condition of the urine indicates a more active treatment. When albuminuria or cylindruria is found in a late syphilitic patient, with or without syphilitic manifestations, outside of potassium iodide in combination with hot-air cabinet baths, mercury can also be used, when by exclusion of all other aetiological factors the cause of the affection of the kidney can be judiciously ascribed to the syphilitic virus. Especially are the eliminative functions of the kidney to be investigated in pregnant syphilitic women, and, should those organs be found impaired, mercury must not be used, as even the slightest form of mercurial intoxication, combined with the disarranged conditions of the stomach and intestines in pregnancy, will produce abortion. When the kidneys do not show any signs of impairment, a vigorous treatment—innjections—is advisable, as we have to influence with mercury not one but two human beings, and sometimes more. If malaria is associated with syphilis, quinine in combination with iodine will be of more service than mercury, especially where the specific disease occurs in a poor habit of body with unfavorable surroundings.

Mercury and iodine excepted, the main remedies by which the defensive powers of the system can best be brought into play, there are some auxiliary procedures by which the organism can be advantageously influenced in its life struggle against the syphilitic poison—namely

ly, mineral springs and hot and cold water. The beneficial results obtained at the springs are mostly due to the fact that, owing to the tonic and reconstituent action of the bath and the favorable climatic and hygienic surroundings, a more energetic use of mercury can be made. But the hot-air cabinet bath (45) is of special specific value. Since it has been experimentally demonstrated that toxins are removed by sweat (46), the assumption that syphilitic toxins are eliminated by the profuse perspiration to which the patient is exposed during his stay in the cabinet should not be disregarded. And this observation goes to demonstrate the correctness of some popular habits in countries where syphilis is treated by exposing the patients to a long period of sweating, either evoked by the heat of a stove, upon which the Russian remains the whole winter, or by the high temperature of sea sand, into which the native of Haiti burrows for several weeks (47), both of them increasing the production of sweat by drinking hot tea.

Even surgical interference may have to be resorted to in some obstinate cases of syphilis, where only a slight improvement can be obtained from administering mercury and iodine, especially in syphilitic lesions of bones, which are accessible to secondary infections, such as the nasal and frontal bones (48). Satisfactory results are reported from surgical operations even in syphilis of the brain (49, 50, 51), when the disease, to quote Hamlet, "desperate grown, by desperate appliances is relieved, or not at all."

But even the best preparation administered by the most suitable method will be of small benefit to the patient if he neglects, nay, even if he is indifferent to what best increases the defensive power of the system, hygiene and diet. Not to impress upon the patient the great importance of hygiene in the successful struggle against syphilis is more than a mistake on the part of the physician. Everything looking toward the maintenance of the patient's health on the highest attainable level is necessary in the treatment of syphilis. Especially must the patient be guarded against bodily and mental fatigue, the usual forerunners of late syphilis of the nervous system. Regarding diet, some precautions are necessary during active mercurial treatment. The digestive tract must not be irritated by food which is liable to produce diarrhoea, as grains or cereals (52), and a milk diet is especially desirable in the first months of the early manifestations of syphilis in order to help the kidneys to perform their double function—the elimination of the syphilitic toxins and of the absorbed mercury (53).

In the local treatment of accessible syphilitic manifestations asepis is a prime requisite. The avoidance of irritation, either by medicinal preparations or by mechanical means, is peremptory. It is advisable to keep the exposed ulcer covered by means of mercurial plaster in the case of a dry chancre, and to protect the sore, especially of the lips and tongue, from

becoming a source of transmission by powder or the white or ammoniated mercury ointment.

The local action of calomel is excellent in the earlier moist syphilitic manifestations. Great care is to be taken with infectious sores on the lips and tongue, as the danger from frequent transmission is great.

The nitrate of silver, when used, must be kept separate for each patient, as the handle of the caustic itself may transmit the disease; hence as many sticks as there are patients. Chromic acid in five-per-cent. or ten-per-cent. solution will answer excellently; but better still is a one-per-cent. solution of sublimate in ether and alcohol (hydr. bichlor. corr., 0.3; ether. sulph. alcohol, 15.0).

Here perhaps is the place to consider the treatment of mercurial stomatitis. Owing to its toxic action, chloride of potassium is to be employed sparingly or, better, not at all. For it we can substitute boiled water with or without borax, bicarbonate of sodium, etc. In severe cases of stomatitis the sovereign remedy is ten-per-cent. iodoform gauze stuffed in the pockets of the mouth.

Although the plan of treatment suggested by bacteriological progress did not come up to the expectations of physicians, yet the abortive treatment of syphilis was given great consideration and prominence as a result of laboratory investigations. But the hope that we could cut short or mitigate the course of the disease by exercising the ulcer at its earliest appearance was far from realized. The syphilitic poison is not entirely removed from the system by excision of the sore, even with its adjacent swollen glands, since the inaccessible glands are also involved in the process, as proved by autopsies on subjects with primary lesions.

Furthermore, microscopical examinations demonstrate not only that tissues near the ulcer are changed by the syphilis, but that the blood-vessels and perivascular lymph spaces are involved; and these two roots of a syphilitic chancre are affected at a considerable distance from the primary lesion (54). Even the blood itself is changed during the appearance of the primary sore, showing a diminution in the amount of hæmoglobin with a normal number of red blood-corpuscles (55, 56, 57). It is then not to be wondered at that there is on record not one successful attempt to abort syphilis by excising a classical ulcer. Thus, careful observation antagonizes any attempt to cut short the natural course of syphilis.

Not so with the other attempt to check the development of the syphilitic virus by early calling into action by means of mercury the natural defensive powers of the organism. Here it is claimed that logic and reason, if not observation, point to the administration of mercury just as soon as the poison has entered the system. It is assumed to be unreasonable, even laden with dangers for the patient's future well-being, to wait for early syphilitic manifestations in order to step in with the mercurial treatment. The action of a physician

who institutes the mercurial treatment only when the syphilitic eruptions appear would be more than irrational if the assertion be credited that the simple appearance of an ulcer means the presence of the syphilitic poison in the system, even when the ulcer is accompanied by all its accessories.

So long as we know from clinical observation that manifestations of an early syphilitic character may follow a mere scratch on the penis or an innocent-looking herpetic vesicle without any perceptible gland trouble, and, on the other hand, that a hard ulcer with a retinue of swollen multiple glands disappears without being followed by any syphilitic manifestations, it is wiser to wait for manifestations upon the skin and mucous membranes before making a positive diagnosis. Granting even the claim of some physicians, who, by virtue of their clinical experience, allege they can recognize a primary syphilitic ulcer without waiting for skin or mucous membrane manifestations, owing to that mysterious, undefinable something which is called clinical instinct, nevertheless the administration of mercury in this stage can not be rationally recommended until its action upon the syphilitic poison at this period of its development is proved to be, if not beneficial, at least harmless.

The benefits derived from the use of mercury are estimated by its power to prevent or diminish the most dreaded manifestations of late syphilis. Measured by this standard, the early treatment seems to be at best of no value, as shown by the fact that the percentage of late syphilis is not smaller than it was at the time when all primary ulcers, both hard and soft, were treated by mercury as soon as they appeared.

Furthermore, many patients, on whom most careful observations were made, had early manifestations of syphilis aggravated in their course and form, although they were put under the influence of mercury simultaneously with the appearance of the primary sore.

These clinical facts are supported by microscopical examinations of blood of patients to whom it was given from the time of the appearance of the primary sore, and it was found that both the amount of hæmoglobin and the number of red blood-corpuscles were diminished before the appearance of early manifestations; and the observers asked, Is it logical, is it rational, is it right, to render anæmic a living organism which has to sustain a struggle—a serious life-struggle—against one of the most persistent of infectious poisons? The answer is in the question (58).

But success in treatment does not so much depend upon the time when the administration of mercury is begun as upon its intelligent direction after its institution, and one of the most important moments in the course of treatment is to know when to stop it. Unfortunately, in the management of syphilis, to begin does not imply to end. The ideal end of treatment is to stop when the disease is cured.

The question then arises, Is syphilis curable, and, if so, what are the signs by which we can recognize that moment so devoutly anticipated by every victim of syphilis? It is assumed that syphilis may be cured *sponte sua*. Fournier met, in his private practice, two hundred and twenty-one persons who never used any treatment, who never partook either of mercury or iodine, and every one of the two hundred and twenty-one had different late manifestations of syphilis (59).

Now, if one practitioner can meet with such a number, where is the cure *sponte sua*?

But some hug the pretension that by a prudent use of mercury and iodine we can bring patients suffering with syphilis to a certain and complete cure, as syphilis is the most curable disease among all infectious constitutional diseases (60). In support of their pretensions they bring numerous observations of patients, once syphilitics, who feel well, marry, have healthy children, and die without having the slightest symptoms which could suggest the presence of a syphilitic diathesis.

The first three occurrences happen in persons who nevertheless develop late syphilitic manifestations in after life. The value of the last point will be best demonstrated by remembering that the importance of late syphilitic affections of some viscera, as lungs and heart, in causing death, was recognized by the medical profession only in recent years, and that we hardly know even at present any infallible symptoms by which we could differentiate syphilitic affections of the foregoing organs from other diseases of the same organs without an ocular post-mortem examination, supported by microscopical discoveries.

Even the fact of reinfection (so often mentioned as an infallible proof of the curability of syphilis) can not be so regarded, when we consider the statements of two of the most eminent living syphilographers, Hutchinson and Fournier. While the English syphilographer was so fortunate as to meet with more than one hundred and eight cases of reinfection (61), the French *savant* acknowledges that he did not even meet one undoubted case of a second attack of syphilis (62). In view of these two divergent statements we must admit something wrong in diagnosing reinfection; what one calls a second attack of syphilis, the other accepts for a relapse of the old disease, and so long as this difference in recognizing such an important factor in the establishment of the curability of syphilis exists, the present generation of physicians will be guided in what they hope to accomplish in their treatment of syphilitic patients by the opinion of Ricord, one of the greatest lights in this realm of medicine, who said that neither the dose, nor the preparation, nor the length of treatment gives us the assurance that the disease is completely, absolutely, and radically extinguished.

In view of this statement, the aim of the physician in instituting the treatment is primarily to prevent

the appearance of the late manifestations of syphilis, which usually involve the vital organs of the system in the destructive process. The physicians try to accomplish this desirable end by one of three methods.

Some—the so-called opportunists—administer mercury only when manifestations of the disease are present; some keep patients under the influence of mercury not only when the manifestations are present, but continue its administration for several years. Others give mercury not only when symptoms are present, but also when they are absent—when, as it were, the disease is latent—leaving a sufficient interval between the times when the drug was given for the system to have a chance of eliminating what mercury has been absorbed; thus preparing the tissues so they may respond to the stimulating action of the drug when it is again given.

Further, since they are unable to distinguish between a possible extinction of the disease and a latent condition of the syphilitic poison, some of them, acting logically, advise the use of mercury as long as such a doubt can possibly exist—i. e., for life; others, again, limit the number of years to two or six, trusting that they may accomplish the desired end in this short period, owing to the vigorous treatment they have prescribed.

Thus we see that the adherents of the three methods do not differ to any great extent for the first two years of treatment, as during this period of the natural course of syphilis several series of relapses usually take place, and the patient will have all the advantages of the drug under the care of either. The difference begins during the second year after the outbreak of the earliest syphilitic manifestations. While the opportunist waits for the appearance of syphilis in order to administer mercury, believing that the length of the intermissions in the treatment should correspond with the periods of intermission in the manifestations of the disease, the advocates of the other chronic, intermittent method would keep the same patient under the influence of mercury for years—both being prompted in their actions by the desire to keep away from the patient the danger of late syphilis.

The opportunist believes that the probable benefits the patient may derive in the future from the administration of mercury during the absence of symptoms are far fewer than the inevitable dangers associated with a prolonged use of the drug even during prolonged intervals.

The advocate of the chronic, intermittent method holds that the probable dangers to which the patient exposes himself by absorbing mercury for a prolonged intermittent period are insignificant, compared with the serious rôle late syphilis may play in the patient's life. That some of the dangers, as albuminuria, stomatitis, which may follow the administration of mercury, can be avoided by strict observation of the patient's condition is not questioned by the opportunists, but they

still hold that the prolonged and repeated stimulations of the cell by mercury have a deleterious effect upon that most delicate structure, and consequently upon its function, giving rise to nervous symptoms, which are usually seen in workers exposed to the prolonged action of the drug and, not seldom, in patients stimulated by mercury for a prolonged even intermittent period.

Furthermore, they state that the adherents of the chronic intermittent method have failed up to date to establish their claim that mercury by their method acts upon latent symptoms and prevents the appearance of late syphilis.

It is proved by numerous reports that the percentage of late syphilitic manifestations is not less—other conditions being equal—in countries where the chronic intermittent method is the chief one, than in countries where the opportunists have their sway. Nay, the percentage obtained by both methods is not smaller than the percentage in countries where mercury is employed very little or not at all (64).

The advocates of chronic, intermittent treatment always bring to the front, whenever the reasonableness of their methods is questioned, the fact that a father at one time syphilitic and treated by mercury immediately before his marriage, even without any symptoms being present, will engender a healthy progeny, while the same father not treated would in all probability bring into the world

"A curious frame of Nature's work,
A floweret crushed in the bud,
A nameless piece of babyhood."

This fact, a proof to the adherents of the chronic, intermittent method of the direct action of mercury upon the virus and of its utility in the latent stages where no symptoms are present, is met by the following statement of the opportunists:

First, that a father, even when he is not treated, may procreate during the flourishing stage of his early syphilis a healthy child; secondly, that a father with latent syphilis, whose child was born perfectly healthy, because of treatment previous to precreation, may in the next or a subsequent year have syphilitic progeny. This proves that neither does mercury act directly on the syphilitic virus, nor is it the only factor influencing the power to produce a latent syphilis.

The need of giving mercury to make sure we can prevent this hereditary transmission is all the greater since there are no precursory signs for us to recognize (such as in the heart and brain affections in late syphilis, when necessary precautions can be taken to prevent irreparable visceral damages), not even a shadow of a symptom to warn us, until we are at once confronted with the accomplished fact of the action of the syphilitic virus.

Every physician must for this reason take into consideration the possibility of hereditary transmission as

a kind of an invisible symptom, when under his care is a patient who is going to procreate offspring.

It is seen thus that a patient derives no more benefit from the chronic, intermittent method than from the symptomatic plan of treatment; and, moreover, is exposed to the influence of an inorganic element, alien, at best, to the organic matter of the body, if indeed it be not baleful.

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28 WEST FIFTY-NINTH STREET.

THE PREVENTION OF HAY FEVER.

By EDWARD W. WRIGHT, M.D.,
BROOKLYN.

In recent years hay fever has become more amenable to treatment as a result of careful and thorough study of all the causes that produce it.

It has been decided by the best authorities, American and European, that hay fever is a total or partial loss of control of the small nerves which regulate the size of the blood-vessels in the nose (vasomotor paresis). This condition accounts for the profuse watery discharge, the paroxysms of sneezing, the occlusion of the nose, and all the other distressing derangements so well known to the sufferer.

If these small nerves by any means regain control of the blood-vessels relief is obtained at once.

Every artery in the human body is surrounded by

the tiny tendrils of a nerve. The nervous force carried along these branches adjusts the calibre of the vessel to the conditions required. In hay fever the nervous force carried by these small nerve ramifications is less than normal; therefore the blood-vessels are dilated and the interior tissues of the nose are engorged with blood.

The blood supply of the nose is peculiar. Ordinarily, the blood supply to the skin, mucous membranes, muscles, and organs is uniformly distributed; but in the nose there are clusters of blood-vessels (erectile vascular tissue).

Lying on the lower scroll bones in the interior of the nose, and covered by the mucous membrane, is a nest or congeries of blood-vessels. In other parts of the nose small clusters are found.

In hay fever the nerves controlling the calibre of the blood-vessels have partially or totally lost their power. Consequently, the vessels and the surrounding soft tissues become engorged with blood. This increase in size of the blood-vessels and the adjacent tissues presses upon and stretches the nerve endings of the sneezing area, and paroxysms of sneezing result. Through reflex action the pressure on hypersensitive areas by the engorged tissues excites the excessive sneezing. The osmosis of the serum from the dilated vessels produces the free watery discharge. In like manner can all the symptoms found in hay fever be explained.

Our inquiry in this article will be, "What causes this loss of nerve control of the blood-vessels?" and the discussion will pertain to the cooperation of the different causes.

There are three cardinal divisions of causes: (a) Exciting; (b) constitutional; (c) local.

Exciting Causes.—The exciting causes are "pollen," dust, smoke, and similar irritants. The popular reason for hay fever is the irritation of the mucous membrane of the nose produced by the "pollen" of flowers and grasses. It has been proved, however, that there are other irritants which are exciting causes. Neither "pollen" nor any of the excitants will produce hay fever unless the local and constitutional causes are present. During a residence in a locality where there are no exciting causes no hay fever will arise, because one of the cardinal causes is removed. Also, if one of the other two chief causes is absent, no hay fever will come, though the exciting causes are abundant.

There is a drug which, sprayed in solution in the nose, will cause contraction of the blood-vessels in *all* persons; but "pollen" or the other excitants falling on the mucous membrane of the nose will, in only a small minority of persons similarly exposed, cause dilatation of the blood-vessels. If the excitants were the *only* cause, they would produce hay fever in the majority; but they do not, because one or more of the other cardinal causes are absent.

To sojourn in a district where there are no exciting causes gives immunity only while residing there. That

the affliction may be permanently relieved, we must secure a condition that will resist the exciting power of "pollen," so that a person may be free from hay fever in any locality and pursue business and pleasure without fear or restriction.

Constitutional Causes.—The relation between the vascular system and the nervous system is intimate. In seeking for further causes of the impaired nerve control of the nasal blood-vessels we would naturally consider the nervous system.

Most of the sufferers from hay fever are persons of high intellectuality, having a nervous organization of great tension. They respond quickly to slight neurotic influences. Often the first attack occurs when the nervous system is below par. Perhaps social duties have been exhausting; or grief, or financial reverses, or severe illness, or worry incident to the wear and tear of life, or heavy business responsibilities have so overtaxed the nervous system that it is incapable of performing fully all its functional duties. Thus the way is prepared for a deranged nervous action upon the blood-vessels when the exciting causes arrive.

Frequently recurring headaches, neuralgias, and functional nervous disorders may so lower the nervous organization that the nerve supply of the blood-vessels is impaired.

To have the best resisting power when the time comes for the appearance of the exciting causes, the nervous system must be at par. That the general nervous system may be in the best possible condition, it is well to do everything to lessen the high tension resultant from continuous social obligation; to minimize the worries of business, and to restrict those conditions which demand too great an expenditure of nerve power.

Nerve tonics may be necessary to restore the loss of nerve tone, or gentle soothing medicine to lessen the strain incident to the overtaxation of the nerves. Perhaps some recreation in new fields, or relaxation from the strain of social or business life, would be effective.

Circulating in the current of blood, and also deposited in the tissues of the body, are found substances that have deleterious effects. These substances—viz., uric acid, xanthine, and hypoxanthine—are the products of imperfect digestion and assimilation. They are not readily soluble, and are with difficulty excreted from the system. When one or all are in excess in the system they have an irritating influence on the small nerves that control the size of the blood-vessels. These by-products are undoubtedly another factor in the series of causes which produce hay fever.

There are several medicines well adapted to the elimination of these excitants, and there are, also, ways of living conducive to their prevention.

Local Causes.—Within the nose are frequently found deviations from the normal, which form another link in this chain of causes. Not only is their presence a contributory cause in the onset of the disease, but dur-

ing an attack they aggravate the distress. These deviations and abnormal conditions have a marked influence on the blood current of the nose and form sensitive areas, the irritation of which affects, by reflex action, the small nerves controlling the diameter of the blood-vessels.

Polypi, large and small, spurs, minute and exaggerated, bony or cartilaginous projections from the septum, a swollen middle turbinated bone, a grayish enlargement of the posterior end of the inferior scroll bone, a thickened condition of the tissues on the lower edge of this bone, hypersensitive areas at some point of the interior of the nose, or a general catarrhal condition of the mucous membrane following the curves into the nooks and crannies of the interior nose, are the main points that must be thoroughly investigated. The relation of these variations from the normal standard to the cause of the trouble must be carefully considered.

By gently searing sensitive areas, by the removal of minute projections of bone or cartilage, by cauterization of hypertrophied tissue, by the removal of polypi, many persons have been cured. To attack indiscriminately every variation from the standard would be poor surgery; to overestimate the importance of a bony projection would be an error; but the relation of cause and effect must be studied carefully in each individual case. Having placed the interior of the nose in the best possible condition, we have prepared the way to give this local region the strongest resisting power against all exciting causes.

We can render the mucous membrane less sensitive, or non-sensitive, to "pollen" or other irritants, give it greater resisting power, and make it immune against the exciting causes by a method that may be termed massage treatment. This treatment came about in the following manner:

In reviewing the chemistry of hypoxanthine, the statement was found that it was present in the "pollen of flowers and grasses." By blowing powder of hypoxanthine into the noses of patients who had had hay fever, it was attempted to excite the symptoms of that condition; but it could only be said to be an irritant. Then the powder was used to render the mucous membrane accustomed to it. Knowing the good effects of tannic acid in eyelid affections, and the beneficial results of iodine in the pharynx, it was decided to use one or both of these in the nose, applying it with gentle friction over the whole mucous membrane of the nose, but more especially to the usual sensitive areas. When there was a thickened condition of mucous membrane and a hypertrophy of parts beneath, iodine, potassium iodide, and glycerin were used. When the mucous membrane was thin, sensitive, with no appearance of hypertrophy, tannic acid, carbolic acid, and glycerin were applied. These, in weak solutions, were thoroughly applied with gentle friction to all the nooks, crannies, and surfaces of the interior of the nose, but

more particularly over the usual sensitive areas, that part of the septum opposite the middle turbinated, and that part of the soft palate just behind the septum. Sometimes it was necessary to use a very weak solution of cocaine in fine spray before a thorough massage could be accomplished. The object of these applications and the friction by massage is to harden the mucous membrane, giving it greater resisting power, and thus an immunity against "pollen" and other excitants—just as cold sponging and friction with coarse towels to a sensitive skin enables the person to wear undergarments that formerly could not be tolerated.

For the treatment of an attack of hay fever two new drugs promise well—orthoform and suprarenal capsule. Orthoform will allay the supersensitiveness, the hyperæsthesia, and the paroxysmal sneezing. Its effects are in duration many times longer than cocaine, and it has no toxic action. When we wish to give the patient free breathing through the nose and lessen the serous discharge, the use of a solution of suprarenal capsule will accomplish the desired result without the disadvantages of cocaine.

Thus a happier and pleasanter summer should be promised the patients who come at the beginning of their annual distress.

To tide these persons well over a season is a break in the "habit," and prepares the way for effective preventive treatment before the time of the expected attack of the next season.

GOLD IN THE TREATMENT OF ANÆMIA AND MALNUTRITION.

By J. P. SHERIDAN, M.D.

A JUST equilibrium of the processes of tissue destruction and reconstruction is absolutely essential to vital force. Through the consumption of its own tissues the body generates heat and vital energy, and from water, air, and particularly food, the cells build up new tissues and store up fresh supplies of material to feed the never slumbering furnace in which this vital transformation is wrought. Truly, adequate nutrition may justly be said to be the prerequisite of physical perfection.

The word "anæmia" means, literally, bloodlessness, and our best authorities say it may be produced by a variety of causes. It will be the object of this paper, however, to point out the fact that after all it is due to malnutrition. The great source of blood supply is the stomach; for the quantity and quality of the blood in the body depend chiefly upon the ability of that portion of the economy to digest and assimilate food. Anything, therefore, which prevents the taking of sufficient food, or interferes with the digestion of food in-

troduced into the stomach, will produce bloodlessness. The degree of bloodlessness will depend upon the length of time and the degree of interference with the source of nutrition.

Among the early symptoms of anæmia we find such conditions as constipation, headaches, palpitation of the heart, exhaustion after the least exertion, lassitude, or, in the infant, a change in the color and frequency of the stools. The stools are either green when passed, or become so later on. Bacteria, according to Lesage, cause the change in color. The frequency of the stools is marked, the quantity is lessened, but the discharges are offensive and irritating. As further evidence of the faulty metabolism, we have other symptoms indicating auto-intoxication.

Blood analysis will show in both the adult and infant a diminution of red blood-corpuscles and an increase of leucocytes; diminished hæmoglobin. A large number of the practitioners of the day treat these cases expectantly—namely, with iron and digestive ferments and plenty of syrups; naturally, the condition becomes more distressing. Syrup of iodide of iron and the various æsthetic elixirs are simply convenient placebos—involving a waste of time. What these patients need is a tonic alterative and proper food.

It is through the cells that the tissues must be built up, and I have found the best preparation to be the liquor of bromide of gold, arsenic, and mercury—mercauro. Results, in the large majority of cases treated with this product, are simply astonishing. Children of six months of age who are anæmic and do not appropriate their nourishment can easily take two drops three times a day and fatten like little pigs. Mercauro is practically tasteless, can be dropped in the milk, and is without doubt a good tonic and reconstructive for the anæmia and malnutrition of infancy and childhood. Another class of cases in which this solution gives most gratifying results is that of slow convalescence after pneumonia, either catarrhal or lobar. I recall the case of a little girl of eight years of age whose parents were sorely distressed for fear that her great debility, which continued after a bad attack of catarrhal pneumonia, might lead to tuberculosis, as this disease was a family inheritance. This child was treated with mercauro and the dose rapidly increased to eight drops three times a day. In two months she was the picture of perfect health. It has been my definite experience that mercauro overcomes anæmia more promptly and more effectually than any form of iron or manganese does. My experience applies to the anæmia of malaria, of tuberculosis, of chlorosis, of childbearing, and of syphilis. Those of us whose practice is extensive among syphilitics have, I feel sure, an excellent preparation in mercauro. How often have we had to suspend all mercurial treatment on account of the fearful anæmia produced by innctions or the protiodide in the treatment of secondary symptoms! The old way was to put the

patient on iron, quinine, and strychnine, but, thanks to the practitioners at Hot Springs, Arkansas, it has been demonstrated conclusively that iron, quinine, and strychnine absolutely do no good except to satisfy the patient that he is swallowing something.

Now mercauro is used with the result that all manifestations of the disease disappear, and the patient, to all intents and purposes, is perfectly well.

A girl aged twenty years had run down from various causes. She came to consult me, being introduced by a lady who had been a patient of mine.

A prominent gynecologist in this city had treated her for over six months. She had a profuse leucorrhœa, with the usual pain in the back. She had paid her doctor sixty dollars, and again at another time forty dollars, and told me she had taken plenty of iron pills and iron mixtures. I treated her with arsenauro. The result at the end of two months is gratifying, though not a surprise to me. She has no leucorrhœa—in fact, is perfectly well. Her only medication was arsenauro administered in fifteen-drop doses in half a goblet of water after each meal.

In cases of too frequent menstruation arsenauro has brought about regularity and cured dysmenorrhœa; it seems to restrain congestion of the sexual organs and should be considered in chronic diseases of menstruation. It has a deservedly high reputation in certain disorders of the reproductive organs of women. In chronic vaginal leucorrhœa, with general weakness and relaxation, arsenauro is of special value. Good results may be looked for in cases of chronic uterine inflammation with marked tendency to relapses. The best effects are obtained when the full physiological action becomes manifest.

POSITION IN SLEEP.

A PRINCIPLE IN NEUROLOGICAL THERAPY.

By WILLIAM BROWNING, M. D.,

BROOKLYN.

DESPITE the proportion of our lives spent in slumber, sleep symptoms contribute but an insignificant part to our clinical data. If such exist, it is common remark that they have almost entirely eluded investigation, nor have physiological studies so far yielded much for the physician. As most vital processes are at an ebb in sleep, we need expect no large mass of independent manifestations, yet there must be some of importance. The matter of dreams has so involved the whole subject of sleep in mystic speculations that we forget to apply simple observation just as to any other matter of living. The processes of life go on during sleep under the same physical laws as at other times. Our medical examination in the waking state takes very little account of the subject's thought, barring the single field of insanity, and in the sleeper it does not matter to us medically what the person dreams. If we can ignore all this, except, perhaps, the mere fact of dreams occurring or

not, and give attention to the actual manifestations of the sleeper, a valuable accession to the clinical side of medicine may be the result.

While there are a number of sleep matters that call for more study and recognition, I wish to direct attention to one that has specially interested me in its relation to nervous diseases.

Certain general considerations may serve to introduce the real subject of this paper. If, e. g., a person is fainting, we do not lift the head, much less get the sufferer upright, but insist on a fully prone position and keep the head low. Again, if we have to resuscitate a patient from anæsthesia, the same plan is followed—we lower the head as much as possible. If a person is prostrated by hæmorrhage, we utilize gravity as an aid to the depleted vessels in sending the needed supply to the brain. Or, when a very weak patient is suddenly lifted, if only to the sitting posture, we know but too well the risk of fainting or even death. Hence it is a well-recognized fact, at least in conditions of general weakness, that the brain circulation is greatly affected by the position of the body and especially of the head. The same principle has long been applied in neurology as part of the so-called rest cure.

These illustrations from the waking state are close parallels to certain sleep conditions. If a person when sleeping prefers to rest with the head unusually low, it is a natural indication that the circulatory and nutritive conditions of the brain are below par.

At any rate, if we look through the wards of a hospital during sleeping hours, or if we observe and question our patients carefully on this matter, we soon find a great diversity of habit regarding the favorite position in sleep.* This applies to adults; in children it is naturally much less apparent.

We have no very exact standard for measurement. But for practical purposes the following classification may suffice:

I. The medium class—persons who sleep with the head on an ordinary or thin pillow and bolster. This may be termed normal and represents the average sleeper. A few persons voluntarily change their custom in this regard and seem to mind it little. All this class can be dropped from further consideration.

II. Those who sleep with the head higher than this standard (bolster plus thick pillow, or plus two pillows, or plus a doubled-up pillow, on an arm, etc.). In some this occurs chiefly when they have been mentally engaged just before retiring. It may be further specified that not infrequently such individuals begin with the head high but gradually slide down as

* To this subject in certain special cases the writer has repeatedly called attention—first, perhaps, in describing a form of morning headache (*Brooklyn Medical Journal*, 1894). Further study, now covering a dozen years or more in all, has shown that the principle applies much more widely. It represents an objective fact, and one that we can usually get at.

the night progresses, and end in the morning with the head medium or even low.

Such persons can not well tolerate any elevation of the feet in sleeping. And this shows also that the position of the head is but a part of the general attitude of the body.

In this category are found cases of excitement, mental overactivity, mania; also a proportion of neurasthenics, epileptics, and nondescripts; besides, of course, many persons who present no special nervous disturbance.

Separate from this class are the various diseases and conditions—such as valvular disease, asthma, fever, advanced dropsy, and perhaps abdominal encroachment—that for special reasons induce their subjects to rest with the head high, irrespective of the principle here presented. Such cases have to be carefully distinguished, and to that extent this class is inexact. For instance, in a recent case where there was grave exhaustion in an asthmatic, the patient slept at medium height, an average between two opposing factors.

III. Those whose habit it is to sleep with the head lower than the usual average. Some of these sleep with the body perfectly flat—neither pillow nor bolster. Of about equal significance is the custom, followed by an occasional individual, of sleeping on the belly, the face turned to one side.* This last habit is oftener resorted to for only a portion of the sleeping hours. Possibly those who sleep with the arms thrown up over the head also belong here.

This (III) class of persons show with greater or less frequency a number of allied characteristics. They are less apt to be given to dreaming. Their sleep is usually profound; in fact, they crave an extra amount. They incline to waken drowsy, tired, and exhausted, and the sounder the sleep the more lethargic are they on awakening. Breakfast has no charms, and their appetite only comes for later meals. If inclined to headache, this is present, and often most severe, on waking, and the condition termed "waking numbness" is oftenest encountered here. Coffee, breakfast, exercise, and perhaps a cold morning rub get them finally roused and in possession of their powers.

Such persons want their feet in sleep on a level with the rest of the body, or even higher; and with them cold feet are not the great impediment to sleep that they are when present in Class II.

Here we find nearly all cases of mental and nervous depression, sufferers from simple melancholia, anemias, and most chlorotics, the special headache cases, those who have been heavily depleted, convalescents from long illness, so-called hypertonic paralytics, many neurasthenics and hysterics, some epileptics, etc.

* A gifted colleague sleeps on his belly, but with the forehead resting on one arm. He alleges that he thus imitates primitive man, since our wandering ancestors must usually have lacked pillows, and so have eked out a head rest with the arm.

Of course, between these three groups many mixed forms (perhaps a majority even of the neuroses cases) are encountered, not falling entirely in either.

In earlier medical days much was said of sthenic *versus* asthenic disorders. Modern pathology has largely done away with such distinctions in the general run of diseases. But in these nerve cases something suggestive of this old view can be made out.

Is this again simply an attempt to rehabilitate the old conception of cerebral anemia or hyperemia? Possibly it amounts to that; but the matter is approached in a different way, and in any case with a basis of actual facts. The practical bearing of these observations is the same whether the proffered explanation is correct or not.

The question may arise whether this sleep condition, however real, is or is not a true index of waking states. Apparently not always; but if we are able to follow such cases for a series of years much will become evident in support of the view that we have here a trusty index of underlying conditions.

And similarly it may be queried whether this is not a habit innate or family affair, with as little clinical importance as, say, color blindness. But such supposition is negatived by the fact that a patient's custom in this respect may change, and also by the wide difference often of the members of one family.

It is, of course, true that people in fair health may exhibit any of these peculiarities. Even in them it shows tendencies, and when occurring in the sick this has a practical bearing.

In such cases as show aberration from the normal in this respect, an indication or criterion is afforded to help us in selecting our remedies. It does not represent a disease, but a rule for determining the general brain condition underlying and doubtless in part causing the special form of disease from which the patient is suffering.

Let us see how it works. The third type (head low) is the more important because naturally the more frequent in the sick. Here the indications are for remedies that either essentially or casually are excitants and tonics. Hence *nux vomica* and its derivatives, *digitalis*, *strophanthus*, and other cardiac tonics, the *valerianates*, *viburnum*, increase of body fluids, alcoholic stimulants, iron, arsenic, and blood builders, overfeeding, rest, come within the range of our choice. On the other hand, we shall find little good here from depressants, whether hypnotic or otherwise.

All this is reversed in the second type of cases (those with head high). Here the field for selection includes, on the contrary, the numerous more or less depleting and depressing remedies, such as *aconitine*, *atropine*, *hyosine*, chloral, bromides, *sulphonal*, *phlebotomy*, warm baths and sweat cures, diaphoretic and expectorant agents, hard work, etc. But all excitants, stimulants, and tonics are contraindicated.

The bearing of this principle on the more important general hygienic regimen of the patient must be clear without further specification.

There are other drugs and agents frequently employed in neurological work that do not fall distinctly in either group, and that consequently may be resorted to independently of this rule. It will also sometimes occur that other and more imperative indications force us to ignore this plan, or more often to combine so as to offset the untoward effect of some desirable drug. In the numerous cases where this principle applies we can readily avail ourselves of it, and where it does not it can be disregarded. I have found it useful in many cases, and feel that it is so simple and trustworthy that it may be worth a trial by others.

Therapeutical Notes.

Powders for Ovarian Neuralgia.—Martin's formula is given as follows in the *Riforma medica* for March 25th:

R Extract of belladonna 3 grains;
Extract of stramonium $4\frac{1}{2}$ "
Lactophenine 90 "

M. Divide into twenty powders. Two or three to be taken daily.

Carron-oil Injections in Gonorrhœa.—W. E. Wamsley (*Brooklyn Medical Journal*, xiii, p. 182; *Merk's Archives*, March), of Brooklyn, at the suggestion of a patient, has tried linimentum calcis as an injection in gonorrhœa and gleet with unusually good results. The patient had used it for a burn and it occurred to him that it might be good in gonorrhœa. The doctor at first paid no attention to the suggestion, but later gave it a trial. He has since used it in twenty-seven cases of acute specific urethritis after a three-days' treatment with the compound copaiba mixture of the *National Formulary*, using it four times a day, and in every case a cure was effected in three or four days. In nine cases of gleet a complete cure was accomplished in from seven to nine days with the carron-oil injections only. The author warns against the danger of this emulsion becoming rancid if kept long, and advises that it be used only when freshly prepared.

Antineuralgic Powders.—The *Riforma medica* for March 25th gives the following formula:

R Quinine hydrobromide 15 grains;
Extract of nux vomica 3 "
Phenacaine, { each 6 "
Eulguine, {
Bayer's powder, {

M. Divide into six powders. Two to be taken daily, before meals.

Pepsin in Burns of the Third Degree. O. Waterman (*Therapeutische Monatshefte*, xii, p. 30; *Merk's Archives*, March), of New York, gives the history of a case of a machinist who received a burn of the third degree caused by some boiling pea soup which was spilled over his left forearm. This was at first treated with

carron oil and next day with iodoform gauze. At the end of three or four days the wound was covered with a dirty whitish purulent secretion with raised edge. Some places were curetted. Pepsin was then sprinkled over the arm and the whole surrounded by a gauze bandage. At the end of four days this was removed and the wound surface was studded over with healthy granulations, and here and there new patches of epidermis had commenced in this short time to develop. The wound was then again cleaned with antiseptics and another sprinkling of pepsin applied. At the end of about twelve or thirteen days the whole arm was healed and there was no scar tissue. It is also to be noted that the patient was anæmic and was suffering from *tabes dorsalis*.

An Elixir of Terpene for Bronchitis.—The *Riforma medica* for March 27th attributes the following formula to Crinon:

R Terpene, { each 10 parts;
Tincture of vanilla, {
Glycerin, {
Alcohol, { each 150 "
Syrup of honey 125 "

M. S.: From two to four soup-spoonfuls to be taken in the course of twenty-four hours.

Chlorethyl Freezing Mixture in Hæmophilia.—Davies (*Brooklyn Medical Journal*, xiii, p. 182; *Merk's Archives*, March), in the case of a patient who was a known "bleeder," immediately on the extraction of a tooth sprayed the cavity with chlorethyl freezing mixture. The blood that first entered the cavity froze into a hard mass, effectually plugging it and preventing further hemorrhage. This procedure he has frequently repeated successfully.

The External Use of Phenacaine in Rheumatism.—The *Revista de Ciencias medicas de Barcelona* for March 25th ascribes the following formula to Taylor:

R Phenacaine 75 grains;
Lanolin 300 "
Olive oil q. s.

M. For an ointment.

Or—

R Phenacaine 75 grains;
Rectified alcohol, { of each 1,500 "
Hot water, {

Compresses may be soaked in this solution and applied hot.

For Spasm of the Glottis.—Friedrichs is credited by the *Revista de Anatomia patológica y Clínica* for February 1st and 15th with the following:

R Extract of belladonna 44 grains;
Anisated solution of ammonia, 375 "
Distilled water 225 "

M.

From ten to twenty drops every three hours in spasm of the glottis.

Compound Wine of Creosote for Tuberculosis.—The *Revue médicale* for April 12th credits the following prescription to Fraenkel:

R Creosote 195 grains;
Tincture of gentian 450 "
Alcohol 3,750 "
Sherry..... enough to make 1 quart

M. Two or three tablespoonfuls to be taken daily in beginning pulmonary tuberculosis when the temperature does not exceed 101.3 F.

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NEW YORK, SATURDAY, MAY 6, 1899.

THE ULTIMATE DISPOSAL OF THE CASE-BOOK.

THE *British Medical Journal* has recently made some noteworthy comments on a matter that seems to us of great importance, that of the disposition that should finally be made of clinical records. Our contemporary's article, which appeared in its issue for April 8th, hinged on an odd incident the account of which had been published in *Truth*. The story was that twenty-one manuscript volumes of notes of cases treated by the late Dr. Alfred Meadows at the Soho Square Hospital for Women had been sold in a "lot" at public auction, and that a gentleman who had been present at the sale, thinking this an improper transaction, had taken the trouble to remonstrate with the hospital authorities, but to no purpose. *Truth's* comment on the matter was: "Setting aside all sentimental considerations, there are necessarily many facts in such books which would afford an opening for the most iniquitous practices if they got into unscrupulous hands." The *British Medical Journal* practically coincides in this, but thinks the danger of real harm occurring is very small, beyond the rendering of certain persons uneasy. Clinical notes, it argues, are usually made in highly technical terms and with great use of abbreviations, so that they would not be readily intelligible to blackmailers; moreover, persons of the class who seek hospital treatment change their place of abode frequently, so that it would put a mischief-maker to some trouble to find them. This is true, no doubt, but unscrupulous persons are not lazy as a rule, and we fear they would have little difficulty in inducing some medical acquaintance to explain technical expressions and abbreviations.

The article closes as follows: "The books of a women's hospital would be less worth investigating than those of almost any other, for an illicit pregnancy is almost the only lever for a blackmailer in such patients, and that is a thing that can hardly be concealed. It is conceivable that a book full of histories of the other sex, in which inquiries as to syphilis had been regularly made, might be very dangerous to the peace of the patients if used by an unscrupulous person. Those who take such notes of private patients are well aware of this. The unscrupulous person searching hospital

case-books might not find his knowledge so profitable as he hoped, and might, as we have hinted, find unexpected consequences, but he nevertheless might be troublesome. Therefore, we repeat, it is the bounden duty of those who manage hospitals to see that notes of cases are either kept in safe custody or destroyed."

It may be that among hospital patients an illicit pregnancy can hardly be concealed, but we doubt if the difficulty of its concealment is very great in the case of private patients as a rule; indeed, we are sure it is not. This leads us to remark that it is not hospital records alone that should be jealously guarded or else destroyed, but those of private practice as well. Perhaps, as the *British Medical Journal* intimates, greater care is taken to make the records of private cases obscure than is observed in noting down the points in hospital cases; but no amount of caution in that direction, short of making the notes in a language known only to the writer, can, it seems to us, make it sure that those records can do no harm if they get into the hands of designing persons. It is to be presumed that every careful practitioner keeps at least skeleton histories of certain of his cases, and it is our conviction that he should keep them carefully secreted so long as he continues in practice, that he should destroy them if at any time he retires from practice, and that on his death they should be destroyed at once without examination. We may add that what is an individual's duty in this respect is also the duty of a hospital. We can not suppose that the late Dr. Meadows would have considered himself at liberty to sell the records of his hospital practice, and we can not see that the hospital had a moral right to do so after his death.

THE PRESENT STATUS OF THE VAGINAL PESSARY.

WHEN a topic seems to have been practically neglected for a considerable length of time, it is well to have it investigated anew, even if, as is the case with the pessary, more than enough has been written about it in bygone years. In the April number of the *Scottish Medical and Surgical Journal* Dr. J. W. Ballantyne furnishes us with an excellent review of the subject of the use of vaginal pessaries in the treatment of prolapse and faulty posture of the uterus—we prefer not to term this last-mentioned abnormality displacement, although there is sometimes an ectopic element in it.

It is evident from the answers to Dr. Ballantyne's inquiries of instrument-makers that pessaries have not fallen into disuse; indeed, for the past twenty years there has been a steady increase in the number sold, but also a steady decrease in the number of varieties asked for, so that the ring and the Hodge or some modifica-

tion of it, with an occasional vaginal stem supported by means of an abdominal belt, are practically the only forms in common use. Those who use the Hodge pessary show a decided tendency to revert to the Albert Smith modification after trying various forms, and those who employ the ring prefer the simple rubber instrument containing watch-spring. Intra-uterine stems are hardly ever asked for.

Without following Dr. Ballantyne in his further treatment of the subject, let us inquire as to how far this state of things is satisfactory, and first as to the continued extensive employment of pessaries. Is the use of a pessary preferable as a general rule to an operation? We believe it is, provided the right kind of pessary is chosen, and provided it is properly managed. We may say at once that we look with scant favor on the ring pessary, particularly one of soft rubber inclosing watch-spring. The action of the spring is apt to be injurious, and soft rubber soon becomes foul in the vagina. The so-called eup pessary we look upon also as highly objectionable, especially when it is so constructed that the vaginal stem simply wobbles on a perineal band. Nevertheless, we think that a properly fashioned vaginal stem, one with a bow like that of the Hodge pessary, so supported by elastic cords passing down from a pelvic belt that the direction in which it presses is under control, and that direction is the right one, is the best of all pessaries. However, a great deal of trouble frequently attends the fitting of it, and the patient has to be carefully instructed in its management. For those reasons the Hodge instrument in its various forms is likely to remain the favorite. In these remarks we have reference only to backward versions of the uterus and to its descent. As for anteversion, the cases are rare that call for treatment, and we think there are better appliances than pessaries for treating those rare instances.

THE VICARIOUS PERFORMANCE OF FUNCTION.

This is an exceedingly interesting subject, but one concerning which our positive knowledge is very limited. We know, of course, in a general way of the reciprocal relations of the skin and the kidneys, but that is not saying much. How largely the matter is still shrouded in uncertainty was well exemplified by a case recently reported to the Paris Medico-surgical Society by M. Pecker (*Presse médicale*, April 1st). It was that of a man, fifty-eight years old, who had had scarlet fever when he was nineteen and sciatitis at the age of forty. For eighteen years he had been troubled with winter cough and respiratory oppression, but one

year diarrhœa supervened and his oppression was at an end.

The man was of alcoholic heredity and given to the use of alcohol himself. His liver appeared to be somewhat atrophied. There was a network of enlarged subcutaneous veins well marked on the right flank, but there was no ascites and the urine contained neither albumin nor sugar. The diagnosis was that of atrophic cirrhosis of the liver. He was treated with potassium iodide, benzonaphthol, tannin, and bismuth salicylate, with the result that his intestinal evacuations became less liquid and less burning.

In October, 1898, after a short railway journey, he felt sensations of cold in his feet and in the loins, also atrocious pains in the region of the left kidney, radiating along the ureter and to the testicle. The pain was intermittent and accompanied with vomiting. At night he had chills, with chattering of the teeth. The kidney was enlarged. The amount of urine voided in twenty-four hours was from six to nine ounces, and it contained traces of albumin. The temperature ranged from 100.4° to 101.6° F. The diagnosis at that time was hydronephrosis, but it was changed to hepatic cirrhosis with renal congestion. In spite of rational treatment, the urine did not increase in quantity, ascites occurred, calling for two tapplings, and finally the man died.

M. Pecker thought the case showed how life could be maintained so long as the organs supplemented each other adequately. The patient bore his cirrhosis as long as the kidney assisted the liver; when the kidney in turn failed, the system gave up the struggle. It was undeniable, he thought, that the diarrhœa had been compensatory; indeed, the man had been thankful for it, for it had caused his pulmonary oppression to disappear, and then the kidney trouble had come on as the result of chilling.

M. Gautrelet suggested that the diarrhœa might have been due to heightened arterial tension, but M. Pecker had always found the tension below normal. M. Berthod thought that a false sense of security was engendered by the idea of compensatory function; one organ, he said, might, indeed, take the place of another temporarily, but not for a very long time, for it became exhausted from the excessive work put upon it. M. Verchère called attention to the uncertainty as to what organ it would be that would take the place of another; when an organ was diseased, he said, all the others that were sound strove to assist it. From all this it will be seen how largely the speculative point of view was taken by those who joined in the discussion, and how little ground there was for any other course.

THE TRANSPLANTATION OF A HUMAN OVARY.

DR. JAMES H. GLASS, in the *Medical News* for April 29th, records a very interesting case. A young woman who had had a double oophorectomy performed some two years previously applied for relief from the train of symptoms, lapse of sexual instinct, mental depression, insomnia, giddiness, palpitations, heat flushes, pelvic pains *et hoc genus omne*, which are not uncommon sequelæ of that operation. General treatment proving of no avail, on May 11, 1898, ventrofixation was performed. A second patient, aged seventeen years, married, having suffered serious injury during parturition, which had resulted in such deformity that future child-bearing would inevitably entail Cæsarean section, it was determined to sterilize her by removal of the tubes and ovaries. On May 14th both patients were, with their own consent, anesthetized together, with the view of transplanting the healthy ovary about to be removed from the one woman into the peritoneal cavity of the other. The healthy ovary, immediately on removal, was placed in gauze kept moist with warm normal salt solution. When the first operation was completed, the vagina in the other patient and the connective tissue down to the cervix were incised. The latter was then stripped up to the peritoneum with the finger, and this membrane carefully raised from its attachments to a point approximating the normal position of the ovary. Oozing was controlled by compresses of hot saline solution, the ovary anchored in position by closing, with two tiers of fine catgut, the canal through which it had been introduced, and the vagina lightly packed with silver gauze. The recovery was uninterrupted. After six days a condition of sexual erethism lasting for several days and accompanied by erotic dreams had occurred. After sixteen days menstruation began and lasted two days. It was then absent until December, when it again appeared and was normal in every way. Eight months after the transplantation the patient had regained her equilibrium, and was apparently quite well and healthy. The value of this observation appears to be considerable; for while much of the patient's relief may possibly be attributable to the ventrofixation, the return of the sexual instinct, the recurrence of the menses, and the improved metabolism would appear to be undoubtedly due to the transplantation of the ovary.

CARBOLIC-ACID GANGRENE.

THE danger of gangrene as the result of carbolic-acid applications is again brought to our notice in the *Centralblatt für Gynäkologie* for April 22d, which cites a case of Frankenburg's published in the *Münchener medizinische Wochenschrift* of unmentioned date. A robust peasant girl, twenty years old, ran against the hub of a cart wheel and wounded her thigh superficially. In an apothecary's shop a three-per-cent. solution of carbolic acid was applied, and gutta serena was laid over all. The dressing was kept on for six days, and then the girl was brought to a clinic, where a patch of gangrene as large as the palm of one's hand was found on the inner side of the thigh. When the eschar came away, there appeared a wedge-shaped vacancy exposing the muscles, and at the end of three weeks healing was not complete.

In the same number of the *Centralblatt* there is also an abstract of an article of Czerny's on the subject, published in the same Munich journal about two years ago

(and noticed by us at the time), in which it was laid down that it was not so much the strength of the solution employed as the length of time it was kept applied that led to gangrene. Manifestly this distinction should be borne in mind, even if we do not go so far, as Frankenburg and Leusser do, as to declare that carbolic acid should no longer be used as a dressing.

A CURIOUS CASE OF STRANGULATION OF THE PENIS.

THERE seems to be no end to the pranks played by fools with the genitals. Dr. Floras (*Deutsche medizinische Wochenschrift*, 1898, No. 28; *Monatshefte für praktische Dermatologie*, April 15, 1899) relates the case of a railway official, fifty-five years old, who, having been "dared" by a companion, wormed his flaccid penis through a thick iron screw-nut having an aperture a centimetre and a half (rather more than half an inch) in diameter, forcing the thing as far as the suspensory ligament; but the organ at once became so swollen that he could not withdraw it, although he made efforts to do so for several days and was aided by a sapient doctor who prescribed a diuretic. When the author was called to the man, the penis "hung down like a monstrously inflated sausage," and was gangrenous in places. Two locksmiths were sent for, and are said to have shown wonderful skill in relieving the man of his burden, though how they did it is not stated in the *Monatshefte's* abstract.

THE RESULT OF GRAFTING WHITE SKIN ON A NEGRO.

CERTAIN investigations of Karg's are mentioned in an editorial article in the April number of the *Southern Medical Journal* as leading to the supposition that a piece of the skin of a white person, grafted upon a black, would gradually become black in the course of time. This, however, says the writer, did not happen in a case of Dr. Stuart McGuire's. A negro's leg had been amputated, and sloughing occurred in the flaps. Grafts from a white man's leg that had just been amputated were employed after Thiersch's method, and more than a year later the transplanted skin was found as white as ever.

THE ASSOCIATION OF AMERICAN PHYSICIANS.

THE association's meetings are always important. The one held in Washington this week was no exception. The programme was a good one, representing eminent practitioners of various sections of the country. An excellent feature connected with the meeting was the previous distribution of printed abstracts of the papers to be read. We are indebted to the secretary for a copy of these abstracts, a number of which we have been able to make use of in this issue.

AN AMERICAN SURGEON'S HONORS FROM THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

IT is with great pleasure we record the fact that in April the Royal College of Surgeons of England conferred upon Dr. Frederic S. Dennis, of New York, the rare distinction of the honorary fellowship of the college. The fellowship of the College of Surgeons, one of the, if not the, highest surgical distinctions of Great Britain, has for many years past been obtainable only

after a most rigid examination, though formerly it was an honor conferred by election upon selected members, as the fellowship of the College of Physicians still is. When the change was made, however, the right was reserved of granting two honorary fellowships annually, *honoris causa*, upon selected members of the college of twenty years' standing. This is, we understand, the first time that the honorary fellowship has been conferred upon an American surgeon, though there are many such who are members of the college. Mr. Thomas Frederick Chavasse, a prominent and brilliant surgeon of Birmingham, England, is the other recipient of the honor.

THE "DAVENPORT HEALER."

SOMEbody has been good enough to send us a copy of a publication having the semblance of a newspaper, but devoted to setting forth the healing powers of a certain "Dr. Palmer." This individual not only cures everything in the shape of disease, but takes pupils. Evidently he does not labor long with his pupils, for he says: "Those who can't learn to do what Dr. Palmer is doing in 3 months better not try." In another place he says the student "must use his brains, if he has any." His publication is called the *Chiropractic*, and that apparently is the name of his freakish "system."

THE REVIVAL OF THE PESSARY.

INDICATIONS that the pessary treatment of uterine retroversion is again coming into vogue continue to be found in current literature. We hope that those who take up the use of the instrument will employ it with as much carefulness and attention to detail as are displayed in an excellent article on the subject by Dr. William Mercer Sprigg, of Washington, published in the April number of the *Peoria Medical Journal*. Dr. Sprigg properly insists on the frequent necessity of remodeling the Hodge instrument and its modifications as they are found in the shops, and he cites Fritsch as declaring it "easier to perform a laparotomy than to apply a well-fitting pessary."

ERYTHEMA AS A SEQUEL OF INFLUENZA.

Truly the manifestations of influenza are protean. At a recent meeting of the Paris Hospital Medical Society (*Indépendance médicale*, April 19th) M. Antony reported a case of scarlatiniform erythema occurring during convalescence from influenzal pneumonia, also one of erythema nodosum supervening in the course of bronchopneumonia due to influenza. There was no possibility in either case, he said, that the eruption was caused by any drug. Eruptions occurring in connection with influenza, he remarked, were not rare, but they were generally among the earliest symptoms.

AUTOPLASTY AFTER AMPUTATION OF THE BREAST.

The wound left after latter-day operations for cancer of the breast is sometimes enormous. Certain surgeons have resorted to the device of sliding the other breast with its integument into the chasm. Franke (*Zeitschrift für Chirurgie*, 1899; *Tribune médicale*, April 12th) seems to have improved upon this procedure, especially for cases in which the breast is large. After detaching the healthy breast from the underlying parts,

he excises it, together with its nipple, leaving a flap of integument only, with a central opening (left by the removal of the nipple) through which a drainage tube is passed.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending April 29, 1899:

DISEASES.	Week ending Apr. 22		Week ending Apr. 29.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	15	7	12	8
Scarlet fever.....	217	16	226	17
Cerebro-spinal meningitis....	0	11	0	16
Measles.....	355	16	306	12
Diphtheria.....	180	26	205	32
Croup.....	13	7	8	2
Tuberculosis.....	191	141	170	178
Small-pox.....	2	1	1	0
Chicken-pox.....	26	0	30	0

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Surgery, on Tuesday evening, the 2d inst., Dr. Marshall Clinton, United States Volunteers, read a paper entitled *The Impressions of a Medical Man in Cuba*.

The Maryland Medical Journal.—In the issue of this journal for April 29th Dr. E. F. Cordell gives a very interesting sketch of the medical and surgical faculty of Maryland from 1799 to 1899, which is illustrated with many reproductions of interesting pictures, etc.

A British View of the Campaign in the Philippines.—*The Lancet* for April 22d says: "The news from the Philippines is no doubt disconcerting, for it shows that the task which the Americans set themselves to accomplish is likely to be much harder and longer than was anticipated. But the pendulum of public opinion swings easily from the side of elation to that of gloom, especially where political sentiment is divided and political capital may be made out of war news. The obstacles and difficulties which the Americans are now facing are such as this and other countries have had to encounter before now and have in the end overcome. Campaigns in tropical countries, where the enervating effects of climate and climatic disease have to be met and where the nature of the country, with every inch of which its inhabitants are familiar, lends itself to ambushes and irregular and defensive warfare, are always difficult undertakings. But eventual success depends, after all, upon the determination and fortitude of the more powerful belligerent, and if the American nation, having once set themselves to the task, have made up their minds not to look back until it is done, then we can not doubt that it will eventually be accomplished."

Death of Sir William Roberts, M. D.—By the death of Sir William Roberts, England loses a distinguished physician. He was the first professor of medicine of the Victoria University when that institution was founded in Manchester from the Owens College of that city. He was a member of the senate of the University of London, and the representative of that university upon the general medical council. He contributed largely to medical literature, especially in relation to diseases of

the kidneys and the digestive organs. The deceased physician enjoyed more than an ordinary share of affectionate respect and popularity.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general for the week ending April 29, 1899:

Small-pox—United States.

Tallahassee County, Ala.	Apr. 14	Prevalent.
Los Angeles, Cal.	Apr. 15-22	6 cases.
Washington, D. C.	Apr. 27	1 case.
Savannah, Ga.	Apr. 17	2 cases.
Origin, Montgomery, Ala.		
New Albany, Ind.	Apr. 15-22	2 cases.
Shreveport, La.	Apr. 15-22	3 "
New Orleans, La.	Apr. 15-22	9 "
Boston, Mass.	Apr. 17-28	6 "
Minneapolis, Minn.	Apr. 9-15	1 case.
St. Paul, Minn.	Apr. 9-15	1 "
Buffalo, N. Y.	Apr. 20	1 "
Elmira, N. Y.	Apr. 15-22	1 "
Allegheny County, Pa.	Mar. 30-Apr. 12	4 cases.
Cambria County, Pa.	Mar. 30-Apr. 12	1 case.
Blair County, Pa.	Mar. 30-Apr. 12	22 cases.
Fayette County, Pa.	Mar. 30-Apr. 12	48 "
Somerset County, Pa.	Mar. 30-Apr. 12	20 "
Washington County, Pa.	Mar. 30-Apr. 12	1 case.
Providence, R. I.	Apr. 21	2 cases.
Galveston, Texas.	Apr. 1-15	10 "
Laredo, Texas.	Apr. 1-8	17 "
Newport News, Va.	Apr. 14-19	9 "
Norfolk, Va.	Apr. 13-26	41 "
Portsmouth, Va.	Apr. 13	10 "

Small-pox—Foreign.

Ghent, Belgium	Apr. 1-8	1 death.
Bahia, Brazil	Mar. 18-Apr. 8	8 cases, 1 "
Rio de Janeiro, Brazil	Mar. 3-10	1 case, 7 deaths.
Hongkong, China	Mar. 3-11	3 cases, 1 death.
London, England	Mar. 25-Apr. 8	2 "
Athens, Greece	Mar. 25-Apr. 8	62 " 32 deaths.
Bombay, India	Mar. 14-21	10 "
Calcutta, India	Mar. 4-18	8 "
Seoul, Korea	Mar. 11	Many cases and deaths.
Mexico, Mexico	Apr. 9-16	10 cases, 4 deaths.
Moscow, Russia	Mar. 25-Apr. 1	20 " 3 "
Odessa, Russia	Apr. 1-8	2 " 1 death.
St. Petersburg, Russia	Mar. 25-Apr. 1	16 " 3 deaths.
Warsaw, Russia	Mar. 18-Apr. 1	5 "
Constantinople, Turkey	Mar. 20-Apr. 10	22 " 1 death.
Smyrna, Turkey	Mar. 12-26	1 death.
Montevideo, Uruguay	Mar. 11-18	1 case.

Yellow Fever.

Bahia, Brazil	Mar. 18-Apr. 1	13 cases, 7 deaths.
Rio de Janeiro, Brazil	Mar. 3-10	91 " 58 "
Vera Cruz, Mexico	Apr. 13-20	4 "

Cholera.

Bombay, India	Mar. 14-21	7 deaths.
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Plague.

Tamsui, Formosa	Feb. 22-Mar. 8	63 deaths.
Bombay, India	Mar. 4-21	1,128 "
	officially reported.	Probably 1,960 "
Calcutta, India	Mar. 3-18	188 "

The St. Louis Medical Society.—At the last meeting, on Saturday, April 29th, Dr. J. B. Ross read a paper entitled *Antitoxine, Therapeutically Useless and Biologically Faulty*.

The State Civil-Service Examinations.—We would call the attention of our younger readers to the notice given in our advertising columns of competitive examinations to be held soon of candidates for appointments in the New York State hospitals.

Changes of Address.—Dr. James R. English, to No. 239 West Fifty-second Street, New York; Dr. W. J.

Mersereau, to No. 366 Lexington Avenue, New York; Dr. D. F. Monash, from Des Moines, Iowa, to Chicago, Illinois; Dr. William Hallock Park, to No. 315 West Seventy-sixth Street, New York; Dr. H. B. Poinsett, to No. 144 West One Hundred and Fourth Street, New York; Dr. Winslow W. Skinner (formerly of New York), from Ajaccio, Corsica, to No. 2 Piazza degli antinori, Florence, Italy; Dr. Max A. Zipser, to No. 52 St. Mark's Place, New York.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 22 to April 29, 1899:*

BRADFELD, GEORGE M., Acting Assistant Surgeon, will proceed to Governor's Island and report to the commanding general, Department of the East.

GREENLEAF, CHARLES F., Colonel and Assistant Surgeon-General, will proceed to Savannah to superintend the sanitation of the military camps near that city.

MEYERS, SIDNEY J., Acting Assistant Surgeon, will proceed to Louisville and report to the surgeon-general.

MUNSON, EDWARD L., Captain and Assistant Surgeon, is detailed as a member of the board of officers at Washington to examine persons designated for appointment as paymasters, *vice* REED, WALTER, Major and Surgeon, relieved.

PORTER, ALEXANDER S., First Lieutenant and Assistant Surgeon, will report at San Francisco for examination.

A board of officers, to consist of **FORWOOD, WILLIAM H.**, Colonel and Assistant Surgeon-General; **EVERTS, EDWARD**, Captain and Assistant Surgeon; and **RAYMOND, THOMAS U.**, Captain and Assistant Surgeon, is appointed to meet at San Francisco for the examination of officers of the medical department for promotion.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending April 29, 1899:*

BARBER, G. H., Passed Assistant Surgeon. Detached from the Naval Academy and ordered to the *Monongahela*.

HOLCOMB, R. C., Assistant Surgeon. Detached from the Naval Academy and ordered to the *Monongahela*.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending April 27, 1899:*

BAILLACHE, PRESTON H., Surgeon. Granted leave of absence for thirty days on account of sickness. April 21, 1899.

WHEELER, W. A., Surgeon. Granted leave of absence for twenty-seven days from June 4, 1899. April 21, 1899.

BANKS, C. E., Surgeon. To proceed to Vineyard Haven, Massachusetts, New York, N. Y., and Baltimore, Maryland, as inspector. April 27, 1899.

PETRUS, W. J., Passed Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., on May 16, 1899, for examination to determine fitness for promotion. April 27, 1899.

MAGRUDER, G. M., Passed Assistant Surgeon. To report to chairman of board of examiners at Washing-

ton, D. C., on May 16, 1899, for examination to determine fitness for promotion. April 27, 1899.

KINYOUN, J. J., Passed Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., on May 16, 1899, for examination to determine fitness for promotion. April 27, 1899. Relieved from duty as director of the Hygienic Laboratory, Washington, D. C., and directed to proceed, not later than June 1, 1899, to the San Francisco, California, Quarantine Station and assume command. April 27, 1899.

WEITENBAKER, C. P., Passed Assistant Surgeon. To report to the Governor of Virginia for special temporary duty. April 21, 1899.

PERRY, J. C., Passed Assistant Surgeon. To assume temporary command of the service at Port Townsend, Washington, during the absence of Passed Assistant Surgeon C. H. GARDNER. April 24, 1899.

ROSENAU, M. J., Passed Assistant Surgeon. Upon being relieved from duty at Santiago, Cuba, to proceed to Washington, D. C., and assume charge of the Hygienic Laboratory as director. April 27, 1899.

EAGER, J. M., Passed Assistant Surgeon. To proceed to Evansville, Indiana, and Cincinnati, Ohio, as inspector, and to Louisville, Kentucky, as inspector of unserviceable property. April 22, 1899.

BARKER, H. B., Assistant Surgeon. To proceed to Santiago, Cuba, and report to Passed Assistant Surgeon M. J. ROSENAU for duty. April 24, 1899.

FOSTER, M. H., Assistant Surgeon. To proceed to the Brunswick, Georgia, Quarantine Station for special temporary duty. April 27, 1899.

LUMSDEN, L. L., Assistant Surgeon. Relieved from duty as sanitary inspector on the United States transport *Logan* and directed to report to the medical officer in charge of the Savannah Quarantine Station for temporary duty. April 22, 1899. To report at Washington, D. C., en route for Seattle, Washington. April 25, 1899.

RAMUS, CARL, Assistant Surgeon. To proceed to Norfolk and Portsmouth, Virginia, for special temporary duty. April 26, 1899.

Board Convened.

Board convened to meet at Washington, D. C., Tuesday, May 16, 1899, at 10 o'clock a. m., for the examination of passed assistant surgeons to determine their fitness for promotion to the grade of surgeon. Detail for the board: Surgeon CHARLES E. BANKS, chairman; Surgeon J. H. WHITE, and Surgeon P. M. CARLINGTON, recorder.

Resignation.

WHEELER, W. A., Surgeon. Resignation accepted, by direction of the President, as tendered, to take effect June 30, 1899. April 20, 1899.

Society Meetings for the Coming Week:

MONDAY, May 8th: New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, May 9th: Washington State Medical Society (first day—Tacoma); Nebraska State Medical Society (first day—Lincoln); American Climatological Association (first day—New York); New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, New York, Medical Association; Rome, New York, Medical Society; Medical Society of the County of Rensselaer, New York (annual); Newark (private) and Trenton, New Jersey, Medical Associations; Clinical Society of the Elizabeth, New Jersey, General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, May 10th: Ohio State Medical Society (first day—Springfield); Washington State Medical Society (second day); Nebraska State Medical Society (second day); American Climatological Association (second day); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, May 11th: Ohio State Medical Society (second day); Nebraska State Medical Society (third day); American Climatological Association (third day); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, New York (annual); South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, May 12th: Ohio State Medical Society (third day); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, New York.

SATURDAY, May 13th: Obstetrical Society of Boston (private).

Births, Marriages, and Deaths.

Married.

BAKER—HAYES.—In Brooklyn, on Wednesday, April 26th, Dr. Frank Russell Baker and Miss Louise Rawson Hayes.

COOPER—LEWIS.—In New Orleans, on Wednesday, April 26th, Dr. Webster Herbert Cooper and Miss Nellie Hyams Lewis.

DUNBAR—BISLAND.—In New Orleans, on Wednesday, April 26th, Dr. Joseph Dunbar and Miss Sadie Bisland.

FERGUSON—GRAY.—In New York, on Saturday, April 29th, Dr. J. Burr Ferguson and Miss Pauline Gray.

HICKS—HAMILTON.—In Brooklyn, on Wednesday, April 26th, Dr. John Ravenswood Hicks, of Warrenton, Virginia, and Miss Grace Hamilton.

MAGEE—PARKER.—In Portsmouth, Virginia, on Tuesday, April 25th, Dr. M. d'Arcy Magee, of Washington, D. C., and Miss Margaret E. Parker.

MATTHEWS—MATTHEWS.—In Brooklyn, on Wednesday, April 26th, Mr. John Ames Matthews and Miss Grace Edna Matthews, daughter of Dr. Henry C. Matthews.

PRICE—MOTT.—In New York, on Wednesday, April 26th, Dr. Jacob C. Price, of Branchville, New Jersey, and Mrs. Alice Westbrook Mott.

WILLIAMS—KING.—In Allegheny, Pennsylvania, on Wednesday, April 26th, Mr. Otis L. Williams and Miss Nina Bakewell King, daughter of Dr. Cyrus Black King, of Allegheny.

Died.

GORTON.—In Providence, Rhode Island, on Monday, May 1st, Dr. William Arthur Gorton.

KISSANE.—In Brooklyn, on Wednesday, April 26th, Dr. William E. Kissane.

RAKESTRAW.—In Hicksville, Ohio, on Tuesday, April 25th, Dr. B. M. Rakestraw, in the eighty-first year of his age.

SMITH.—In Bronxville, New York, on Tuesday, May 2d, Mary A. Smith, wife of Dr. David E. Smith, in the sixty-sixth year of her age.

was mistaken; for no sooner had A. S. taken three doses of five grains each than a severe coryza and an intolerable facial neuralgia made him miserable. The pain was especially excruciating in both superior maxillæ.

The lad, not in the least attributing his suffering to the mischievous iodide, came to his brother with his tale of woe. He intended to have some teeth extracted to relieve the agonizing pain in the maxillæ. Upon inquiry it turned out that he had never had a toothache before—in fact, that his teeth were perfectly sound. His brother, the physician, was struck by the similarity of the symptoms to his own at the time of his taking the iodide, and was convinced that they were all due to the iodide. A cocaine spray was resorted to, and with the aid of bromide of sodium and phenacetine A. S. was soon relieved of the unpleasant manifestations of iodism.

It seems to me that the case of these two brothers, manifesting such severe symptoms of iodism after a small dose, is a remarkable one, and would justify one in calling it a family idiosyncrasy of intolerance to iodides.

KATHERINA EOSEROFF-MARYSON, M. D.

THE PERIOD OF INCUBATION OF MEASLES.

April 15, 1899.

To the Editor of the New York Medical Journal:

SIR: In the *Journal* for April 8, 1899, under the heading of Pith of Current Literature, it is related that Dr. James C. Wilson, in a lecture, told of an adult with typhoid fever being placed in an ambulance with a person having measles. On the thirteenth day thereafter symptoms of measles developed in him and the rash appeared on the eighteenth day. The doctor therefore concludes that the incubation period ascribed to measles should be lengthened because in this case the exact date of exposure was known. Now, it is not in a spirit of criticism that I write, but simply to state the facts in an experiment of my own.

Fifteen years ago, in 1884, previous to having studied medicine in a college, I was teaching in the far South. There was in my room an enrollment of eighty and there was an average attendance of sixty-four boys and girls of the average age of seven years. The month was February and the day was chilly, so that the doors were closed. There were six windows, and all of them were open about two inches at the top. At 10.15 A. M. a pupil entered, saying he had come for his books, as his little sister had the measles. By way of parenthesis, let me say here that I was always fond of scientific experiments from my earliest childhood and have often exposed my life in my eagerness for facts. It is not strange, then, that some thoughts went through my mind with the rapidity of lightning. "A good time to test the contagiousness of measles. . . . It's against the rules to let this boy remain in school for the day, but—fifteen minutes—nothing can be said. This boy is well, had the measles himself several years ago. Wonder if he has the contagion in his clothing! Sixty-four children, seven years old—not many have had measles. Am I doing right? Mild climate—measles light always, no danger—I'll try it." Then I said to the boy: "I want to see you a moment at recess. Take your seat till then. It's only fifteen minutes." His desk was exactly in the centre of the room. It could not have been better situated for the experiment. At the end of the fifteen minutes all the children were turned out and made to engage in vigorous exercise in a large playground for the time of recess—fifteen minutes. To make sure that

Letters to the Editor.

A FAMILY IDIOSYNCRASY [FOR IODINE.

95 STANTON STREET, NEW YORK, *April 14, 1899.*

To the Editor of the New York Medical Journal:

SIR: Kindly permit me to report in your valuable *Journal* the following case of extraordinary susceptibility to iodides in two brothers:

H. S., a physician, thirty-five years old, suffering from aortic regurgitation, was advised by his physician to take iodide of potassium, five grains, three times daily. He took the first dose on January 28, 1899, toward evening. Soon after he experienced the onset of an acute coryza. The following morning he took another dose, whereupon his coryza became aggravated. His eyes were suffused and his nose was red and swollen, the mucous membrane being very irritable and discharging profusely. He became somewhat suspicious of the iodide, but, considering the small size of the dose, ventured upon another one in the afternoon. His coryza was now something fearful to behold, and in addition he complained of an intolerable neuralgia of all the branches of the facial nerve. He described the pain as stabbing, tearing, and unbearable, as driving him mad and making him think of committing suicide to obtain relief. He was now convinced that the iodide was at the bottom of the trouble. A two-per-cent. cocaine solution injected into the nostrils gave immediate relief in that quarter; another injection and a dose of phenacetine caused his neuralgia to be lessened in severity, and in a few hours he was as well as ever.

A few weeks later his brother, A. S., twenty-two years old, a drug-store clerk, had some small boils on the nape of the neck. Some one suggested to him to take iodide of potassium. He asked his brother, the physician, for an opinion, and the latter told him to try it, as it would surely do no harm. But in this the doctor

the boy did not come into immediate contact with any one, I sent him immediately home and watched him till he was out of sight.

It was not without some little anxiety that I called the roll every morning after that, but all was serene till the eighth day thereafter, when twenty empty seats greeted my eye. Several more children dropped out each succeeding day till the fourteenth, when there were but twenty-two little ones to answer the roll call. It is needless to say that these had all had the measles before. My own child was among the number out. On the sixth day of absence I took pains to send a messenger with a note to the home of each child, inquiring the cause of absence. The invariable answer was, measles. As the reply came, a little *m* was written in the column for the first day of absence, and forty-two such letters appeared. I have that record book till now, with the names and ages of the children. In a month's time all had returned safe and sound. There were no deaths and no sequelae. The usual time of absence was two weeks.

Now, what was learned by this wholesale experiment? 1. *The extreme contagiousness of the disease.* The child who gave the contagion did not have the disease himself. He had simply come from a home where it existed. He had walked a mile in the open air to get to the school. He came in immediate contact with no one child. He remained in the room but fifteen minutes. The room was ample in size for the number of children and had six windows, all open a little at the top. At the end of the fifteen minutes every child, without exception, was made to exercise for a time in the open air. In spite of all this, every one not immune by previous attack took the disease.

2. *The degree of susceptibility* was shown also, for it was not those who sat nearest the infected child that were first to leave. The empty seats were scattered all over the room.

3. *The period of incubation* was shown to be from eight to fourteen days, according to the degree of susceptibility. It may be argued that all did not contract the disease from this exposure. To this I will reply that there was not an epidemic of the measles at the time, that twenty children came down with the disease on the same day—the eighth—after the exposure, and that in six days thereafter there were forty-two children absent with the same disease. All this would point to the schoolroom and the single exposure as the cause of every attack.

I have just one question to ask of the doctor. Does he think it best to use the case of an adult in making estimates and formulating facts concerning a disease which is essentially a children's disease? The adult is not so susceptible as the child, and, besides, in the case noted the patient had another acute disease, which would tend to make him still less susceptible. Is that not the case?

SARA NEWCOMB MERRICK, M. D.

TYPHOID FEVER AS A CAUSE OF EPILEPSY.

CHAS. COLONY, SOMER, N. Y., April 13, 1899.

To the Editor of the New York Medical Journal:

SIR: In an editorial note in the *Journal* for April 15th I noticed that M. Dide, in the *Revue de médecine* for February, considers that typhoid fever plays a very prominent part in the etiology of epilepsy. From personal experience in the examination of several hundred epileptics in America, I have seen but one case where

typhoid could have been urged as a causative agent in the slightest degree; in this case there was a marked neurotic predisposition. I am quite certain that in the experience of my fellow epileptologists in America typhoid fever acts less frequently as a cause of epilepsy than almost any other infectious disease or fever.

It is comparatively common to see many varied forms of mental disturbance, such as mania and melancholia, follow typhoid. Taking this into account, the rarity of typhoid in the etiology of epilepsy is quite phenomenal.

L. PIERCE CLARK, M. D.

THE CITY BOARD OF HEALTH AND THE SALE OF ANTITOXINE.

NEW YORK, April 24, 1899.

To the Editor of the New York Medical Journal:

SIR: I have taken a deep interest in the question of the municipal sales of the laboratory products of the department of health, as any taxpayer must who takes the trouble to look at all closely into the details of the expenditure of public moneys. My interest has been heightened by the communications of five hundred medical men in the city and fifteen hundred in the State who have signified to me their support of the measures recently before the legislature seeking to remove the objectionable provisions of the charter under which this municipal commercialism is permitted. This shows clearly what is the sentiment of the medical profession at large and when free from the personal solicitation of the very few to whose interest the continuance of the present system is important.

In the discussion there has been no desire to bring any adverse criticism on the department of health as a department, for it is recognized that the health commissioners are doing their best under very trying conditions. At no period of the discussion was any effort made to impugn the quality of the antitoxine made by the department of health. The only thing which could bear that construction was an offhand statement of Commissioner Cosby before the assembly committee on affairs of cities. A great deal more prominence has been given to this statement made in the heat of debate than it really warrants. Dr. Cosby was intent on meeting a question which seemed to tend in the direction of proving that the selling branch of the department had adopted such trade methods of competition as cutting rates in Chicago. Rather than permit that impression to go unchallenged, Dr. Cosby, taking up a transaction with which he could not be wholly familiar, as it had taken place under a previous administration, unguardedly made some statements which might be taken as implying that the antitoxine was inferior in quality. His own explanation of his remarks is the very natural one that he is not accustomed to so speaking, and said things which he never intended to say.

Since the defeat of the bill in the legislature Colonel Murphy, the president of the department, has accorded a hearing on the subject to a deputation of physicians and others interested in the matter. He was very cordial in his reception and displayed abundant desire to correct anything which should bring the department under the criticism of the medical profession. The objections to the present system were presented to his careful consideration, and his many questions showed that he was trying to get at the bottom of the topic. Several of the deputation addressed him at more or less length, and thus was presented a wide range of opin-

ion, not only of the medical profession and professional journalism, but of important business organizations. It was not expected that Colonel Murphy would render his decision then and there, for his only purpose in the meeting was to accumulate a mass of forceful opinion which should aid him in coming to a settlement of the matter in his own mind. But he did express his thanks to those who had called on him, and he assured them that what they had said would have due weight with him, and that his determination would be announced at as early a date as was compatible with full study of the best procedure. In conclusion, he dismissed his callers with the assurance that when his decision was reached they would not find it disappointing to them.

REYNOLD W. WILCOX, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XVII.

RIGHT TO COMPENSATION; FAILURE TO BENEFIT PATIENT
NO NECESSARY BAR TO RECOVERY OF COMPENSATION.

(Continued from page 612.)

Illustrations.—Whether or not a physician has complied with the requirements of the law in a given case is a question of fact to be determined by the jury by the aid of expert evidence. In a recent Illinois case the evidence showed that the patient was thrown from his buggy and his left shoulder joint dislocated by the fall. On the following day he called upon the doctor, who, the evidence tends to show, properly reduced the dislocation. In three or four days he called again, according to the physician's instructions, and the shoulder appeared to be doing well. The patient was not again seen by the physician for about forty-five days, when the shoulder was found to be in an ankylosed condition, and unable to be moved. On the following day the patient returned to the doctor's office by appointment; the doctor administered anesthetics to him and proceeded to break up the adhesions, but in doing so ruptured the axillary artery. The next day the physician and patient went to Chicago, where an eminent surgeon performed a surgical operation on him. He cut down upon the blood-vessel, cleaned out the cavity, which was filled with blood clot, sought out the bleeding vessel, tied it, sewed up the wound, and dressed it. He testified that the head of the humerus was in the socket where it belonged. The patient never fully recovered from the injury, and, as the evidence tends to show, his arm is stiff and the humerus out of place.

The physician brought suit to recover his fee, and the patient contested it on the ground that the dislocation was never in the first instance reduced, and that caused the ankylosis and the necessity of breaking up the adhesions from which the subsequent trouble resulted. The patient also contended that if the shoulder had been properly reduced in the first instance, and ankylosis had set in, it was not proper practice to break up the adhesions; that he would have got proper motion in the lapse of time without it. The doc-

tor introduced the evidence of several of the most eminent physicians of Chicago, who gave their opinion that the treatment of the patient's wound was good practice at every step. Upon the advisability of breaking up the adhesions, one physician testified as an expert witness as follows: "Patients don't always get the benefits that we hope they will get in cases where the shoulder has been dislocated, but that advice was such as a surgeon in good practice would give under the circumstances."

The evidence also tended to show that the surgical operation necessitated by the rupture of the axillary artery was the probable cause of the shoulder becoming again dislocated.

The jury concluded from the evidence that the physician had treated the patient's shoulder in a reasonably skillful manner according to the practice of surgeons, and accordingly gave him a verdict. The appellate court sustained the verdict, and, in commenting on the case, said: "A physician is not an insurer of the success of his treatment, and is entitled to pay for his services whether he succeeds in curing his patient or not, provided he uses the skill of an ordinarily skillful physician."*

In a Tennessee case of some years ago an amputation was performed with a large butcher knife and a carpenter's sash saw as the surgical instruments. The operation, however, appeared to have been well performed, and the patient, under a proper treatment, soon recovered. The representative of the patient contested the collection of the physician's fee upon several grounds. The court held that the operation seemed to have been performed with a reasonable degree of skill, and accordingly sustained the verdict of the jury giving the physician his fee. The supreme court, in commenting on the case, said: "It certainly requires some degree of skill in anatomy and surgery to perform an operation of the kind, and the success that attended it, though not conclusive, is a circumstance from which the skill may be inferred. The instruments employed, drawn from other vocations, not the most congenial for the special occasion, were certainly unusual and extraordinary for such a purpose. But we are not to infer from this circumstance alone that the surgeons had not sufficient art and skill in the use of them. Besides, it is possible that the delay necessary to procure proper instruments might have been fatal to the patient."†

It does not necessarily follow that a physician has failed in performing his legal duty to his patient, and is therefore not entitled to compensation, because he has mistaken the nature of his disease and treated him for an ailment from which he is not suffering. In a recent case brought in New Jersey by a physician to recover a fee, the defendant interposed the defense that the physician had prescribed and administered remedies for a disease which he had not. The trial justice instructed the jury that this insistence of the defendant, even if true, would not prevent a recovery; that the question was whether the physician exercised proper care and skill as a physician; that if the jury should conclude that the doctor was mistaken in the nature of the defendant's disease, they must go still further, and say that a want of care and skill was exhibited. If no want of care or skill appeared, he was entitled to a fair compensation, although he fell into a mistake. This is undoubtedly a correct statement of the law, and in

* *Yunker vs. Marshall*, 65 Ill. App., 667.

† *Alder vs. Buckley*, 1 Swan (Tenn.), 69.

applying it to a given case it remains for the jury to determine whether or not, as a matter of fact, the physician has failed in bringing the proper amount of knowledge to the case or did not exercise a reasonable and ordinary degree of skill and care.*

Effect of Incompetency or Neglect upon Right to Recover.—Whether a physician's failure to possess the proper degree of learning and skill, or neglect to use proper care in their exercise, does *ipso facto* preclude him from all right to compensation is a question upon which there is a direct conflict of authority.

The courts of New York hold that such failure on the part of the physician does defeat all right to compensation; and as a corollary to this proposition they hold that a judgment obtained in a suit for the value of services in a given case conclusively establishes the propriety of the physician's treatment in that case, and that an action for malpractice can not afterward be based upon the same case.† The supreme court of Maine expresses itself in harmony with the New York courts and this proposition when it says: "The same facts which would authorize a recovery for malpractice would constitute a defense in a suit for professional services."‡

In a later case, in Wisconsin, the court repudiated this doctrine, and held that the physician's claim for fees and the patient's claim for damages resulting from malpractice were two separate and distinct claims.⁴ The doctrine laid down by the supreme court of Wisconsin has been approved and followed by a recent case in Iowa. The court in that case says: "It does not necessarily follow that because a physician or surgeon may be guilty of negligence, which causes some inconsequential or inconsiderable injury, he is to be deprived of all compensation for his services on account thereof. Whether he shall lose the value of his services depends upon the amount of damages suffered by reason of his neglect to perform his duty. No penalty beyond the amount of the actual damages sustained is to be visited upon him because of his negligence or want of skill."||

The latter doctrine is thought to be the better law, and the Iowa and Wisconsin cases will probably be followed as precedents by the courts of those States which are not already committed to the contrary doctrine.

(To be continued.)

Pith of Current Literature.

New (Platinum) Method of Obtaining a Black Reaction in Certain Tissue Elements of the Central Nervous System.—Dr. W. Ford Robertson (*Scottish Medical and Surgical Journal*, January) describes the following method of staining nerve tissues, which, judging from the beautiful plates that accompany his article, must be highly effective. He says that he has made a number of experiments on tissues hardened in a ten-per-cent. solution of formalin (which is a forty-per-cent.

solution of formaldehyde in water) in solutions of platinum, palladium, and silver. The salt of platinum that he has employed is the bichloride. He finds that the reaction obtained varies in certain respects in accordance with the proportion of formalin that is added to the platinum solution. Provisionally, he recommends that the fluid employed should be made by the addition of five per cent. of formalin to a one-per-cent. solution of platinum bichloride. A piece of tissue is placed in about twenty times its volume of this fluid. The bottle should be corked, but not tightly, as it is necessary that air should not be entirely excluded. In from one to three months the piece of tissue begins to blacken. It must, however, be allowed to remain in the fluid for several weeks longer, during which time the process of blackening proceeds so long as any platinum chloride remains. It seems important that throughout this stage the bottle should be somewhat tightly corked in order to prevent too rapid formation of platinum black, and its consequent precipitation in the fluid. If the platinum chloride appears to be exhausted before the tissue is sufficiently blackened, more may be added. When ready for examination the piece of tissue is placed in dextrin solution for several hours, and then cut into thin sections with the aid of the freezing microtome. These are dehydrated, cleared, and mounted in balsam in the usual way. He has, so far, seen no injury of the preparations from the use of a cover glass. The deposit which forms is evidently what is known as "platinum black," a substance which consists either of metallic platinum or of an oxide of this metal. The chemical change in the platinum bichloride seems to be dependent upon the presence in the solution of a certain quantity of formic acid, which is slowly produced by oxidation of the formaldehyde. As he has indicated, the black reaction does not occur in a uniform manner throughout the tissues, but selects first certain special elements. The histological picture produced is one which is entirely different from that obtained by Golgi's sublimate and silver methods and their modifications.

Owing to the long time that is required for the carrying out of the method, the amount of material that he has been able to examine by it up to the present is not very large, and chiefly for this reason he has found it impossible as yet to come to a definite conclusion upon many of the difficult questions suggested by the appearances that the preparations present. But the new view of the structure of the central nervous system that the method is capable of furnishing has seemed to him so full of interest, and in certain respects so important, that he has thought it desirable to publish a short account of the matter without further delay.

The chief structural features, he says, revealed by this method may be grouped under four headings—viz.: (1) The presence of fibres in the walls of the intracerebral and medullary vessels; (2) the primitive fibrils of the protoplasm of the nerve cell; (3) the presence of certain granules in the nucleus of the nerve cell; and (4) the existence of special cell elements in the brain. There are also other minor structural features brought out, upon which, however, he does not propose to touch at present.

Laparotomy for Perforating Ulcer of the Stomach.—M. Hildebrandt (*Tribune med. abt.*, April 12th) recently communicated to the Medical Society of Kiel the case of a man, forty-four years of age, suddenly seized with violent abdominal pains and an association of symp-

* Ell vs. Willour, 49 N. J. L., 685.

† Hollinger vs. Craig, 31 Barb., 534. Gates vs. Preston, 41 N. Y.,

113.

‡ Patten vs. Wiggin, 51 Me., 594.

⁴ Rosseau vs. Hyers, 52 Wis., 651.

|| Whitwell vs. Hill, 66 N. W. Rep., 894.

toms pointing to a perforating ulcer of the stomach. Medical treatment caused temporary alleviation, but subsequent augmentation ensued and peritonitis supervened. On opening the abdominal cavity, notwithstanding the patient's desperate condition, agglutinated coils of intestine were seen. There was a serofibrinous exudation and also a purulent effusion in the pelvis. On raising the liver the perforation was found at the lesser curvature near the pylorus. Three stitches were inserted. The abdominal cavity was cleaned and packed with sterilized gauze for drainage, two silk sutures being inserted in the abdominal wall. The temperature remained high for ten days and then fell to normal, and the patient was discharged from the hospital two months later.

Largine in the Treatment of Gonorrhœa.—Dr. L. Fürst (*Lassar's dermatologische Zeitschrift*, iv; *Presse médicale*, March 25th) describes largine as a grayish powder easily soluble in water, forming a clear solution which is feebly alkaline and quite stable if kept in colored bottles. It is a silver compound closely allied to protargol. It has all the medicinal properties of protargol and is a more energetic antiseptic. With a 1-to-4,000 solution, Pezzoli, Kornfeld, and Aufrecht have destroyed virulent cultures of the gonococcus in ten minutes. Fürst has employed largine with complete success in the treatment of eleven women affected with endometritis, cervical metritis, inflammation of the vulva, or inflammation of the urethra and bladder. In every case the gonorrhœal nature of the trouble had been demonstrated microscopically. Largine in aqueous solution is employed as an irrigant. It is well to begin with a weak solution, 1 to 200, and increase the strength gradually.

The Early Diagnosis of Epithelioma of the Penis.—Mr. Jonathan Hutchinson, F.R.C.S. (*Lancet*, April 22d), in a clinical lecture recently delivered at the London Hospital, said: "When cancer of the penis is left to itself it kills either by hæmorrhage or by infection of lymphatic glands in the groin. The all-important point is to recognize the cases before the lymphatic glands have become adherent to the vessels, and not to mistake them for cases of primary chancres or tertiary growths, or for warty growths. A careful microscopic examination of the discharge ought to settle this point, and if any doubt still remains, then you should slit up the prepuce. If you carefully do these things it may make a difference of many years of life to your patient."

Gelatin Injections in Hemorrhages.—At a recent meeting of the Lancian Society of the Hospitals of Rome (*Riforma medica*, March 28th) Dr. U. Arcangeli reported that he had used this treatment with complete success in two cases of purpura hæmorrhagica. He described the technics as most simple. The gelatin employed was of the variety known to bacteriologists as "gold-marked" [*marca d'oro*]. The solution was sterilized over a water bath, and had to be warmed at the time of its employment, the preparation being solid at ordinary temperatures. The injections were thrown into the subcutaneous tissue of the abdominal wall. This treatment, the speaker thought, could be employed with confidence in scurvy, purpura, hæmoptysis, the intestinal hæmorrhage of typhoid fever, hæmatemesis, the epistaxis and other hæmorrhages of malarial cachexia, and the hæmorrhages of pernicious anaemia. It was contraindicated by actual endocarditis and by alterations of the cerebral arteries.

The Composition of Chartreuse.—The *Revue médicale* for April 19th, citing the *France médicale*, gives a summary of the facts from an article by the Vicomte d'Avenel in the *Revue des deux mondes* relating to the composition of chartreuse. More than forty plants enter into its composition. The principal one is balm (*Melissa officinalis*), of which from two hundred and fifty to five hundred grammes are present in a hundred litres; hyssop in flower, peppermint, Alpine génepi (*Artemisia glacialis*), the seeds and roots of angelica, of each from a hundred and twenty-five to two hundred and fifty grammes; then in smaller quantities, varying from fifteen to thirty grammes, arnica flowers, thyme, balsamite, the buds of the poplar balsam (*Populus balsamea*), Chinese cinnamon, mace, coriander, aloes, cardamoms, etc. Moreover, each hundred litres contains an alcoholate in which are present with "majolaine," clove pinks, and lavender, four kinds of pepper (long, Jamaica, cubeb, and culinary), pine resin, treacle, hyacinth, balsam of nutmeg, kneaded together in Malaga wine. A hundred litres of the liqueur contain about twenty-six hundred grammes of this mixture, and the cost of preparation scarcely exceeds eight francs (about \$1.60). The quality and age of the alcohol used in the manufacture are the principal feature. The medicinal properties of chartreuse as a stomachic, antidyseptic, and carminative are well known, but truly it is a "bird-shot" prescription. Its popularity, however, doubtless depends on its palatableness rather than on its medicinal properties.

Gelsemium in Grippe.—According to the *Medical Monograph* for April, Dr. Barry, of Mexico, suggests the administration in grippe of five-drop doses of tincture of gelsemium every hour till the physiological effect is reached, which should be maintained for twenty-four hours. [The physiological effects of gelsemium being of a paralytic character, we imagine that considerable caution is requisite in the use of this prescription, which we are not told that the author has actually used.]

Birth of Fœtus per Vias Naturales in a Case of Extra-uterine Pregnancy.—Malinowski (*Medizinskoje Obolsrenyoe*, 1898; *Obstetries*, April, 1899) reports this case as occurring in a woman, aged thirty-eight years, a multipara. During labor abdominal palpation revealed one tumor, corresponding to the uterus, with a second smaller one, attached to the former and on the right side. Pains becoming inefficient, forceps were applied, but were unsuccessful. Craniotomy was then performed and child removed, but the smaller tumor did not disappear. The operator's hand was then introduced into the empty uterus, and thence to the right Fallopian tube, where the placenta was found and removed. The woman made a good recovery.

Experiments on the Prophylactic Value of Cinchona Preparations issued in Indian Jails.—Captain W. J. Buchanan, I. M. S. (*Journal of Tropical Medicine*, March), thus formulates the conclusions derived from an investigation of jail practice in India:

"It will appear . . . that the opinion of the fifty-one medical officers in India who replied to my queries is on the whole favorable to the prophylactic issue of quinine or cinchonidine. That the results are not more marked is due to many considerations—viz., a somewhat changing population (in small jails with short-term prisoners at least) and local considerations of climate and season. It is also more than probable that the results would have been better marked if

quinine had been given in place of cinchonidine. In India this prophylactic has been tried against the æstivo-autumnal fevers; it has been very little tried in cases of spring fevers; indeed, in my experience the fevers we get in the plains of northern India in the dry hot months are not malarial but due to exposure, heat, sun, etc. I have certainly found the hæmatozoa much less frequently in the spring months than in the rainy season, from August to the end of October. Personally the result of my three years' experience of this prophylactic on a large scale (not less than twelve hundred prisoners daily) is to make me enthusiastically in favor of it, and I believe the more thoroughly it is carried out the greater will be the benefit to the persons taking it. In the ensuing season I shall try the effects of still larger doses."

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of February 1, 1899.

The President, Dr. S. ALEXANDER, in the Chair.

Ligation of the Subclavian Artery.—Dr. JOHN F. ERDMANN presented a patient in whom he had successfully ligated the third portion of the subclavian artery for aneurysmal varix following a gunshot wound.

Report of a Case of Removal of the Gasserian Ganglion, with the Second and Third Divisions of the Fifth Nerve; Hartley-Krause Operation.—Dr. ERDMANN reported the case. (See page 621.)

Dr. JOSEPH COLLINS said that the paper was of more than usual interest, in view of the very satisfactory results that had attended an operation concerning the advisability of which there was by no means a feeling of unanimity in the profession. The impotency of drugs in the successful treatment of true tic douloureux was a painful reflection on therapeutics. We heard of tic douloureux being treated successfully by this drug and by that, but those who had the modern conception of the disease knew that the cases reported cured were symptomatic trifacial neuralgia and not genuine tic douloureux. The latter was not only a degenerative nervous disease, but occasionally a nervous disease of degeneracy. The treatment that was demanded for its relief must be more searching than mere relief of the pain. The entire organism must be fortified, the nutritive fluids stimulated to do their work, and, at the same time, the local parts the seat of the disease subjected to the application of measures which would help to maintain local nutrition. These ends could best be attained, according to his experience, by adopting the plan of treatment suggested some years ago by Dr. Dana, which consisted in the administration of strychnine, hypodermically, in doses of from one sixteenth to one fortieth of a grain, and iodide of potassium, in doses of from seven to twenty grains, depending upon the changes in the blood vessels, while the patient was made to remain in bed and put through a modified rest cure. This plan of treatment, the speaker said, had served him satisfactorily when all other plans of medication had failed. That it was not infallible for tic douloureux might be readily inferred.

Latterly he had been in the habit of combining the strychnine with small doses of morphine, and with, it seemed to him, more satisfactory results than when the strychnine alone was given. He did not believe that the strychnine had any specific effect. It contributed to restoration of neural equilibrium, and acted as an efficient helper to the alteratives, tonics, and nutritional measures that were simultaneously adopted. Every case of inveterate tic douloureux should be subjected to this plan of treatment, and thoroughly, before the question of undertaking such a hazardous operation as extirpation of the Gasserian ganglion was discussed. One might not infer, from listening to the paper of the evening, that this was an operation fraught with great peril to him who decided to accept it in the hope that it might either assuage his suffering or result in death; but, as a matter of fact, it was not at all unlikely that the mortality was from thirty to forty per cent., although the most reliable statistics made it only about twenty-two per cent. Before undertaking an operation that was attended with such mortality as this for the relief of a disease that did not lead to death, save by the hand of the sufferer, the surgeon should have convinced himself that every other way of treating it with any degree of success had failed. He should not delude himself that he was justified in performing it because the patient, after having been apprised of its danger, had willingly consented. Sufferers from tic douloureux would consent to almost anything on account of the absolute unendurableness of the pain. But the surgeon owed a duty to himself as well as to the patient, and this duty required that every other means of treating the disease should be exhausted before it was subjected to operation. It was encouraging to find that those who had most experience with the operation were maintaining that the mortality rate was in definite relationship to the technics, and as the latter was improved the mortality rate would be lowered. From his limited experience in having these patients operated on, it had seemed to him that it was advisable at the present time to have the operation done in two sittings. The fact that destruction of the cornea occurred so late seemed to be against the existence of special trophic nerves.

Dr. QUIMBY said he could not let Dr. Collins make such logical statements and then close with such an illogical one as that there could be no trophic nerve in the Gasserian ganglion. No conclusion could be logically drawn from a single case.

The President said he would like to ask Dr. Collins the result of the large doses of strychnine. He had not operated in these cases, but had noticed cases treated with medicines with but little beneficial results.

Dr. COLLINS said he had seen two cases treated with morphine and strychnine last autumn, both in old persons, and there had been no return of the trouble. He had seen a woman treated in the same manner with recovery. She had afterward sustained the shock of the loss of her husband, and had not relapsed.

The administration of strychnine alone was not to be advised, for there were none of the cases that did not show arteriosclerosis. He fully believed that this treatment would be found the most advisable. In response to Dr. Quimby he wished to say that he still held there was no trophic nerve in the Gasserian ganglion, but did not hold that there were no sympathetic nerves.

The President asked Dr. Collins how much of the favorable results was attributable to the strychnine and how much to the morphine.

Dr. COLLINS said that in the first published cases no morphine had been given. He thought the beneficial action was due to the strychnine in its regenerative effect upon the nerves. Iodide of potassium perhaps acted in the same way. He thought that the morphine only tended to assuage the pain, to carry the patient on for a time. One sixth of a grain was as much as was administered. He thought the good effects were due to the rest, the strychnine, and the alleviating of the pain with the morphine.

Dr. PARKER SYMS asked Dr. Erdmann if he thought the destruction of the cornea after the man returned to his home had been due to trauma.

Dr. ERDMANN said the man had returned to his home, was about attending to his business on the farm, and had reported to his physician, after six or seven weeks had elapsed, that his sight was becoming defective on the side of the operation. In all probability the ulceration was due to some injury by dust.

In regard to the mortality, it seemed to vary with the method of operation. The early statistics embraced operations by different methods, while those he had given were those of the Hartley-Krause method only.

(To be concluded.)

Book Notices.

General Physiology: An Outline of the Science of Life.

By MAX VERWORN, M. D., Ph. D., A. O. Professor of Physiology in the Medical Faculty of the University of Jena. Translated from the Second German Edition and edited by FREDERIC S. LEE, Ph. D., Adjunct Professor of Physiology in Columbia University. With Two Hundred and Eighty-five Illustrations. New York: The Macmillan Company, 1899. Pp. xvi-615. [Price, \$4.]

THIS work is a translation of the second German edition, and is described on the title-page as "an outline of the science of life." The book has been very generally read in the German scientific world, and it may be read to advantage by any one seeking scientific information regarding the phenomena of life. Its general purpose is to trace back to the individual cells the source of activities in life. Thus, the respiration and the circulation of the blood are not elementary phenomena, but are the consequence of the contraction of the respiratory muscles or of the heart muscles. In these muscles the activity is due to the power which the muscle cells possess of changing their form, of becoming shorter and thicker. This power is not derived from nothing, but from energy developed through chemical changes within the cells in strict accordance with the universal law of the conservation of energy.

The book defines an organic individual as "a unitary mass of living substance which under definite external vital conditions is capable of self-preservation." These individuals are represented as consisting of five orders of increasing complexity: 1. Single cells, unicellular organisms. 2. Tissues, consisting of cells, like certain algae. 3. Organs, consisting of tissues, like the hydra. 4. Persons, made up of organs, like man. 5. Communities made up of persons, like communities of ants and bees. Through such a scheme the possibility of development along the lines of evolution is made clear.

Biological relations between different kinds of cells and living things are constantly kept in view throughout the book.

The general historical review and the chapter on suspended animation will be found interesting. The theories of development are fully discussed. The book contains two hundred and eighty-five excellent illustrations.

Some of the repetition of the original German has been eliminated in this translation, although some, perhaps necessarily, has been retained. In spite of the fact that the book would be stronger if it could be more condensed, it remains a very instructive treatise upon general physiology, considered from a standpoint not usually so fully emphasized. In this more novel treatment lie its charm and value, and medical and scientific men generally may well be grateful to Dr. Lee for his excellent translation.

Elementary Physiology. By BENJAMIN MOORE, M. A., Professor of Physiology in the Medical Department of Yale University, etc. With One Hundred and Twenty-five Illustrations. New York, London, and Bombay: Longmans, Green, & Co., 1899. Pp. vi-295.

PROFESSOR MOORE'S book, while emphasizing perhaps too strongly the anatomical details of the subject, is still an excellent one for its purpose. Though it has been written with as little of the usual technical language as possible, technical names are used throughout. It is thus of value to the junior student, and at the same time not too cumbersome for the reader whose interest is only a general one. The figures with which the text is fully illustrated are well chosen and clear, and in every case remarkably well reproduced.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Volume I. March, 1899. Surgery of the Head, Neck, and Chest—Diseases of Children—Pathology—Infectious Diseases, including Croupous Pneumonia—Laryngology and Rhinology—Otolaryngology. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. viii-17 to 490.

WE are told in the preface of this volume that "there are at the present time numerous 'annuals,' or 'year-books,' published with the object of recording in condensed form the greater part of the medical literature of the year, but in nearly all of them the process of 'boiling down' has been practised without first sifting the useful from the useless." This statement is in a measure true, but the inference from what follows is to the intent that the volume before us will be a departure from the practice its editor criticises. We are of the opinion that the material contained in this volume has been well selected and ably made use of, but not more so, we think, than is the case in more than one of the excellent annuals now upon the market. In fact, with the exception of certain peculiar advantages of arrangement, it is difficult to see wherein lies the implied superiority of this work as compared with others of the "annual" class. We do not mean to be carping, for indeed we think the work an able and an excellent one; it is only to the assumption of non-apparent and exceptional superiority to which we take exception.

The volume is devoted to the more recent advances and discoveries in the surgery of the head, neck, and chest; the diseases of childhood; pathology; infectious diseases; and laryngology, rhinology, and otology. It is well written and by men whose right to authoritative utterance is unquestioned; it is well edited, and it is exceedingly well published. The division of the work into volumes of convenient size is much to its advantage.

Manual of Clinical Chemistry. By ELIAS H. BARTLEY, B.S., M.D., Ph.G., Professor of Chemistry and Toxicology in the Long Island College Hospital, etc. Thirty-three Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. vi-9 to 150. [Price, \$1.]

THE announcement appearing in the preface of this book that "in this small volume will be found the essentials of chemical diagnosis, or a description of all those chemical processes most useful to the practising physician," is sufficient to describe the scope of the work. It is composed in greater part of the final chapters of the *Text-book of Medical and Pharmaceutical Chemistry* by the same author, and of that work we have already expressed a favorable opinion. To these chapters some material has been added which chiefly concerns food examination and uranalysis. The convenience of having a small volume dealing aptly with chemical diagnosis is self-evident.

Glaucoma: its Symptoms, Varieties, Pathology, and Treatment. By ALEXANDER W. STIRLING, M.D., C.M. (Edin.), D.P.H. (Lond.), Late House Surgeon, Royal Westminster Ophthalmic Hospital, etc. With Illustrations from Microphotographs. St. Louis: Jones H. Parker, 1899. Pp. viii-177.

THIS is a monograph based upon the author's lectures before the students of the Post-graduate Medical School. They have been published serially in the *Annals of Ophthalmology*, and are here reproduced in one volume. The book is a very complete *résumé* of the subject up to the present time. It is divided into fifteen chapters and nearly half of them are devoted to a consideration of the aetiology of the disease. All the theories which have been held as to the causation of glaucoma are fully considered, but it may be thought that too much space has been given to views which have long since been exploded. Three chapters are devoted to a description of the varieties of glaucoma, and three more to treatment. In the latter much stress is laid on the necessity of tearing the iris from its peripheral insertion rather than making an iridectomy by cutting the iris with the scissors. There is a good index and there is an excellent list of biographical references.

A Practical Handbook on the Muscular Anomalies of the Eye. By HOWARD F. HANSELL, A.M., M.D., Clinical Professor of Ophthalmology, Jefferson Medical College, etc., and WENDELL KERR, M.D., Instructor in Ophthalmology, Philadelphia Polytechnic and College for Graduates in Medicine, etc. Twenty-eight Illustrations and One Plate. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. 9 to 187. [Price, \$1.50.]

THIS is a book intended for beginners in ophthalmic work. It is divided into four parts. The first, or an

introductory, part treats of the anatomy and physiology of the external muscles of the eye. The second part is devoted to a consideration of the paralyses of the various ocular muscles, their aetiology, symptomatology, and treatment. The third and most important part takes up the functional anomalies or the various forms of heterophoria, their general diagnosis, the different tests for detecting their presence, and a general consideration of musculo-dynamics. The fourth part is devoted to a description of the operations on the muscles. In the operation for advancement the authors advocate making a conjunctival flap over the course of the muscle, followed by a similar flap of the subconjunctival tissue and capsule of Tenon, so as to give a roomy field for operation, the flap being turned upward and held out of the way by an assistant. The method of introducing the sutures for the purpose of advancement may fairly be the subject of criticism.

There is an excellent index.

Annual and Analytical Cyclopædia of Practical Medicine. By CHARLES E. DE M. SAJOURS, M.D., and One Hundred Associate Editors, Assisted by Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromolithographs, Engravings, and Maps. Volume III. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. vii-600.

THE third volume of this great work carries the vocabulary from Dislocations to Infantile Myxœdema. It is clear that the members of Dr. Sajours' editorial staff continue in their devotion to the undertaking in a degree seldom exemplified in so large and comprehensive a literary work. But it is equally clear that Dr. Sajours himself preserves his initial enthusiasm and masterly supervision. This cyclopædia, we have no hesitation in saying, is one of the most indispensable of medical reference books.

Diet in Illness and Convalescence. By ALICE WORTHINGTON WINTHROP. Profusely Illustrated. New York and London: Harper & Brothers, 1899. Pp. vii-3 to 287.

THE plan on which this book has been prepared is most excellent, for it endeavors first to present the rationale of diet and, in the second place, to give practical instruction in cookery. As a cook-book adapted to the requirements of invalidism too much can not be said in its favor; as a medical or a semi-medical treatise it is very inferior.

The composition of food elements and the physiology of feeding are first very briefly stated, and then digestion is described. Digestion naturally leads up to artificial digestion, the subject that is next discussed. Several chapters that are devoted to the various beverages and foods that are in common use come next, and then there is a brief chapter upon diet for infants. The semi-medical portion of the book is concluded by a description of the diets appropriate in various states of disease. Now, these first chapters, indeed, contain much that is proper and useful, and they are well written, but they are unfortunate in that they are often in error. It is, indeed, a difficult task to decide the mysteries of physiology and of pathology to the uninitiated, and one that requires the skill not only of a teacher, but of an expert. It is unfortunate that the first portion of the

book could not have been omitted, for of the second only praise can be expressed. In it there are given most useful and excellent directions for preparing and serving the food of invalids, and recipes to a very great number are presented. A feature that is useful, too, is the illustration of this part of the book. Indeed, for those who either directly or indirectly are called upon to cater to the sick these chapters can not but be of much assistance, and how important a branch of medicine it is properly to select and prepare and serve the food is perhaps not always appreciated.

BOOKS, ETC., RECEIVED.

Annual and Analytical Cyclopedia of Practical Medicine. By Charles E. de M. Sajous, M.D., and One Hundred Associate Editors; assisted by Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromolithographs, Engravings, and Maps. Volume III. Dislocations to Infantile Myxœdema. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. vii-600.

Chemistry: General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopœia. A Manual on the Science of Chemistry, and its Application in Medicine and Pharmacy. By John Attfield, F.R.S., Ph.D. of the University of Tübingen, F.I.C., F.C.S., for Thirty-four Years Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. Sixteenth Edition. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. xxii-17 to 780.

Clinical Lectures delivered before the Students of the Imperial Moscow University. By G. A. Zacharin, M.D., Late Professor (Emeritus) of Clinical Medicine and Director of the Therapeutical Faculty Clinic of the Imperial Moscow University, etc. Translated from the Fifth Russian Edition by Alexander Rovinsky, M.D., Member of the Massachusetts Medical Society. Boston: Damrell & Upham, 1899. Pp. xvi-187.

A Manual of Organic Materia Medica. Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms. For the Use of Students, Druggists, Pharmacists, and Physicians. By John M. Maisch, Ph.D., Phar. D., Late Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Seventh Edition. Revised by Henry C. C. Maisch, Ph.D., Ph.D., Professor of Materia Medica and Botany in the Medicoburgical College of Philadelphia, Department of Pharmacy. With Two Hundred and Eighty-five Illustrations. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. vi-17 to 523.

The Philosophy of Memory and Other Essays. Consisting of Articles on the Philosophy of Emphasis: The Functions of the Fluid Wedge; the Birth of a Planet; the Laws of Riverflow. By D. T. Smith, M.D., Lecturer on Medical Jurisprudence in the University of Louisville. Louisville: John P. Morton & Company, 1899. Pp. 9 to 263.

The Principles of Bacteriology: A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania. Fifth Edition, enlarged and thoroughly revised. With One Hundred and Nine Illustrations, of which Twenty-six are Colored. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. xi 17 to 590.

The International Medical Annual and Practitioner's Index: A Work of Reference for Medical Prac-

tioners. By Various Contributors. Seventeenth Year. New York: E. B. Treat & Co., 1899. Pp. 758.

Syphilis. Von Dr. Isidor Neumann, o. ö. Professor der Dermatologie und Syphilis an der Universität Wien. Zweite Auflage. Mit 60 Abbildungen. Wien: Alfred Hölder, 1899. Pp. xv-852.

Die Krankheiten der Mundhöhle, des Rachens und des Kehlkopfes. Mit Einschluss der Untersuchungs- und Behandlungsmethoden. Für praktische Aerzte und Studierende. Von Dr. Albert Rosenberg, in Berlin. Zweite neu durchgesehene und erweiterte Auflage. Mit 180 Abbildungen im Text. Berlin: S. Karger, 1899. Pp. x-2 to 412.

Die multiple Fettgewebnecrose. Klinische und experimentelle Studien. Von Dr. Arthur Katz und Dr. Ferdinand Winkler, Assistenten an der allgemeinen Poliklinik in Wien. Mit 15 Abbildungen. Mit einem Vorwort von Dr. Leopold Oser. Berlin: S. Karger, 1899. Pp. 139.

The One Hundred and Ninth Annual Report of the Board of Trustees of the New York Dispensary. For the Year 1898.

Third Annual Report of the State Board of Medical Registration and Examination of Ohio. 1898.

Gallstones and Abscess of Liver. By W. Louis Hartman, M.D., of Syracuse, N.Y. [Reprinted from the *Hahemannian Monthly*.]

A Case of Abnormally High Temperature subsequent to an Attack of Tertian Ague. By S. Grainger, M.D. [Reprinted from the *Canadian Journal of Medicine and Surgery*.]

Some Observations on the Traumatic Neuroses in Relation to Litigation. By Samuel Ayres, M.D., of Pittsburgh. [Reprinted from the *Pennsylvania Medical Journal*.]

Surgery of the Kidney: Being a Study of a Series of Cases in which Methods of Diagnosis and Treatment are Illustrated. By Bayard Holmes, M.D., of Chicago. [Reprinted from the *Journal of the American Medical Association*.]

Growing Children: Their Clothes—and Deformity. By E. Noble Smith, F.R.C.S. Edin., L.R.C.P. Lond., etc.

Vitality: An Appeal, an Apology, and a Challenge. By Lionel S. Beale, of London. [Reprinted from the *Lancet*.]

Some Unlooked-for Occurrences in the Practice of Medicine. By Robert E. Coughlin, M.D., of Brooklyn. [Reprinted from the *Brooklyn Medical Journal*.]

The Bearing of the Neurotrophic Function on Cutaneous Conditions. By Samuel Wolfe, M.D., of Philadelphia. [Reprinted from the *Philadelphia Medical Journal*.]

Remedial Measures Proposed for Pennsylvania. By Samuel Wolfe, M.D. [Reprinted from the *Transactions of the Twenty-fifth National Conference of Charities and Correction*.]

A New Hearing Device. By Emil Amberg, M.D., of Detroit. [Reprinted from the *Physician and Surgeon*.]

The Serum Treatment of Streptococcal Infection. A Report of Five Cases. By E. W. Saunders, M.D., of St. Louis. [Reprinted from the *American Journal of Obstetrics*.]

Zur Histologie der Milchdrüse. Von Anton Slicker, Dr. med. [Sonderabdruck aus dem *Archiv für mikroskopische Anatomie und Entwicklungsgeschichte*.]

Practical Materia Medica for Nurses. With an Appendix containing Poisons and their Antidotes, with

Poison Emergencies; Mineral Waters; Weights and Measures; Dose List; and a Glossary of the Terms used in Materia Medica and Therapeutics. By Emily A. M. Stoney, Late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Massachusetts, etc. Philadelphia: W. B. Saunders, 1899. Pp. 5 to 306. [Price, \$1.50.]

The Anatomy of the Central Nervous System of Man and of Vertebrates in General. By Professor Ludwig Edinger, M. D., Frankfurt-on-the-Main. Translated from the Fifth German Edition by Winfield S. Hall, Ph. D., M. D., Professor of Physiology in the Northwestern University Medical School, Chicago. Assisted by Philo Leon Holland, M. D., Instructor in Clinical Neurology in the Northwestern University Medical School, Chicago; and Edward P. Carlton, B.S., Demonstrator of Histologic Neurology in the Northwestern University Medical School, Chicago. Illustrated with Two Hundred and Fifty-eight Engravings. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. xi-446.

An Epitome of the History of Medicine. By Roswell Park, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a Course of Lectures delivered in the University of Buffalo. Second Edition. Illustrated with Portraits and other Engravings. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. xiv-370.

Urinary Analysis and Diagnosis by Microscopical and Chemical Examination. By Louis Heitzmann, M. D. With One Hundred and Eight Original Illustrations. New York: William Wood & Company, 1899. Pp. xvii-253.

Atlas of the External Diseases of the Eye; including a Brief Treatise on the Pathology and Treatment. By Professor Dr. O. Haab, of Zürich. Authorized Translation from the German. Edited by G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia, etc. With Seventy-six Colored Plates and Six Engravings. Philadelphia: W. B. Saunders, 1899. Pp. 7 to 228.

A Characteristic Materia Medica presented in Reverse Order. By Nicholas Bray, M. D. Dubuque, Iowa: Telegraph Job Print, 1897. Pp. 10 to 705.

Annuaire des eaux minérales, stations climatiques et sanatoria de la France et de l'étranger. Suivi d'une nomenclature des établissements hydrothérapiques. Par le Docteur G. Morice, vice-président de la Société d'hydrologie médicale de Paris, etc. Quarante et unième année, 1899. Paris: Librairie Maloine. Pp. 5 to 287.

Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens. Herausgegeben von der Medizinal-Abtheilung des königlich preussischen Kriegsministeriums. Heft 13. Kriegschirurgen und Feldärzte des 17. und 18. Jahrhunderts. Von Professor Dr. Albert Köhler, Oberstabsarzt I. Cl. Mit 13 Portraits, 5 Abbildungen, und 2 Plänen. Berlin: August Hirschwald, 1899. Pp. x-269.

Beiträge zur Augenheilkunde in Gemeinschaft mit Professor Dr. E. Fuchs, in Wien; Professor Dr. O. Haab, in Zürich; Professor Dr. A. Vossius, in Gießen. Herausgegeben von Professor Dr. R. Deutschnann, in Hamburg. Heft 31-40. Hamburg und Leipzig: Leopold Voss, 1899.

Anthropological Investigations on One Thousand White and Colored Children of Both Sexes; the inmates of the New York Juvenile Asylum; with Addi-

tional Notes on One Hundred Colored Children of the New York Colored Orphan Asylum. By Dr. Ales Hrdlicka.

Annual Reports of the Bureau of Health of the City of Denver. For the Years 1897 and 1898.

Transactions of the Berks County Medical Society. For the Year ending December 31, 1898.

The Bête Noire of the Vocalist. By Edwin Pynchon, M. D., of Chicago. [Reprinted from the *Alkaloidal Clinic*.]

The Absolute and Permanent Cure of Tonsillitis. By Edwin Pynchon, M. D. [Reprinted from the *Alkaloidal Clinic*.]

A Lecture on the Causes and Treatment of Harelip. By Francis J. Shepherd, M. D., of Montreal. [Reprinted from the *Montreal Medical Journal*.]

On So-called Functional Heart Murmurs. By Maude E. Abbott, M. D., of Montreal. [Reprinted from the *Montreal Medical Journal*.]

A Series of Nine Abdominal Pan-hysterectomies performed in One Year for Uterine Fibromyoma. By F. A. L. Lockhart, M. B., of Montreal. [Reprinted from the *Montreal Medical Journal*.]

The Progress of Rhinolaryngology. By W. Scheppegrell, M. D., of New Orleans. [Reprinted from the *Laryngoscope*.]

Office Treatment of Hemorrhoids and of Fistula in Ano. By Eugene F. Hoyt, M. D. [Reprinted from the *Medical Era*.]

A Rapid and Successful Treatment of Chronic Ulcers of the Leg. By A. H. Ohmann-Dumesnil, M. D., of St. Louis. [Reprinted from the *St. Louis Medical and Surgical Journal*.]

Edema of the Larynx. By Charles E. Clark, M. D., of Kansas City. [Reprinted from the *Laryngoscope*.]

On the Vaso-motor Nerves of the Small Intestine. By J. L. Bunch, M. D., of London. [Reprinted from the *Journal of Physiology*.]

Phthisis. By G. H. E. Starke, M. D. [Reprinted from the *Dietetic and Hygienic Gazette*.]

Hernia. A Clinical Lecture delivered at the New York Post-graduate Medical School. By W. B. De Garmo, M. D. [Reprinted from *International Clinics*.]

De la voix chuchotée. Par M. Paul Olivier. [Extrait de la *Revue internationale de rhinologie, otologie, laryngologie et phonétique expérimentale*.]

Zur Wirkung des Nafatlans. Von Dr. Vehmeyer. [Separat-Abdruck aus *Die ärztliche Praxis*.]

Die Einrichtungen der Unfall-Abtheilung im Königl. Charité-Krankenhaus. Von Dr. A. Köhler. [Separat-Abdruck aus den *Charité-Annalen*.]

Chirurgische Krankheiten an Kopf, Hals und Brust. Bearbeitet von Professor Dr. A. Köhler. [Separat-Abdruck aus *Virchow's Jahresbericht der gesammten Medicin*.]

Miscellany.

The Society of the Alumni of the Sloane Maternity Hospital.—At the annual dinner, held in the New York Athletic Club on April 28th, the following officers were elected: President, Dr. George L. Broadhead; vice-presidents, Dr. A. Ernest Gallant and Dr. Eugene Coleman Savidge; recording secretary, Dr. James D. Voorhes;

corresponding secretary, Dr. Frank R. Oastler; treasurer, Dr. Edwin Sternberger; pathologist, Dr. James Ewing; members of the council, Dr. James J. Philips, Dr. William S. Stone, and Dr. Edward W. Peet.

American Climatological Association.—The sixteenth annual meeting will be held in New York on Tuesday, Wednesday, and Thursday, May 9th, 10th, and 11th, under the presidency of Dr. Beverley Robinson. The programme contains the following titles: Address by the president: The Ideal Physician—his Character and Attainments; The Treatment of Consumption by Air and Light in Colorado: Air as a Cure; Ranching; Tent Life compared with House Life; Effect of Light, by Dr. Charles Fox Gardiner, of Colorado Springs; Suggestions concerning Early Diagnosis in Pulmonary Tuberculosis, by Dr. Sherman G. Bouney, of Denver; Notes on the Tuberculin Test, by Dr. E. O. Otis, of Boston; Subsequent Histories of "Arrested Cases" of Phthisis treated at the Sharon Sanitarium, by Dr. Vincent Y. Bowditch, of Boston; Röntgen-ray Examinations in Lucipent Pulmonary Tuberculosis, by Dr. Francis H. Williams, of Boston; The Intermediate Altitude for the Consumptive, by Dr. B. P. Anderson, of Colorado Springs; The Contagiousness of Phthisis Pulmonalis, by Dr. E. L. Shurly, of Detroit; Why Fumigation of Apartments occupied by Tuberculous Patients at Health Resorts should be under Municipal Control, by Dr. Charles F. McGahan, of Aiken, South Carolina; The Climate of the East Coast of Florida, by Dr. Frank Fremont Smith, of Palm Beach, Florida; Climate in Relation to Renal Disease, by Dr. J. B. Walker, of Philadelphia; Climate as it Affects the Skin and its Diseases, by Dr. L. D. Bulkley; Hygienics of the Skin, by Dr. L. D. Judd, of Philadelphia; Hydrotherapy in the Treatment of Insomnia, by Dr. Irwin H. Hance, of Lakewood, N. J.; The Climatology of Nudity, by Dr. W. D. Robinson, of Philadelphia; Recent Inquiries concerning the Blood Changes Induced by Altitude, by Dr. S. E. Solly, of Colorado Springs; Altitude and Heart Disease, with a Report of Cases, by Dr. Robert H. Babcock, of Chicago; Functional Cardiac Murmurs, by Dr. A. Jacobi, of New York; The Prognosis in Chronic Valvular Affections of the Heart, by Dr. N. S. Davis, Jr., of Chicago; The Treatment of the Cardiac Asthenia of Pneumonia, by Dr. H. L. Elsner, of Syracuse, N. Y.; Remarks based on a Further Experience with Calomel in Diphtheria, by Dr. L. D. Judd, of Philadelphia; Esophageal Suction as a Cause of a Simulated Heart Murmur, by Dr. Roland G. Curtin, of Philadelphia; A Note on Exercises Suitable for Children with Heart Troubles, by Dr. John Madison Taylor, of Philadelphia; Embolism, by Dr. William M. Gibson, of Utica, N. Y.; Empyema from a Surgical Standpoint, by Dr. John C. Munro, of Boston; Traumatic Rupture of the Heart without Penetration of the Chest Wall, by Dr. Richard C. Newton, of Montclair, N. J.; Bicycling in its Relation to Heart Disease, by Dr. A. C. Getchell, of Worcester, Massachusetts; The Effect of Violent and Prolonged Muscular Exercise upon the Heart, by Dr. Harold Williams, of Boston; The Relation of Local Meteorologic Conditions to the Influenza Epidemic in Philadelphia in the Winter of 1898-'99, by Dr. Howard S. Anders, of Philadelphia; and The Cold Wave of February, 1899, by Dr. Guy Hinsdale, of Philadelphia.

Idiopathic Dilatation of the Colon.—At the fourteenth annual meeting of the Association of American

Physicians, held in Washington this week, Dr. J. P. Crozer Griffith, of Philadelphia, presented a paper in which he said that dilatation of the colon might depend upon several causes. First, there might be an acquired dilatation, oftentimes the result of chronic constipation. Second, there might be a congenital dilatation dependent upon some form of stenosis. Third, there might be a congenital idiopathic dilatation—*i. e.*, not dependent upon any discoverable organic cause. Since there was considerable difference among writers regarding the selection of reported cases of idiopathic dilatation, the author had reviewed all the public cases so far as they were known to him, and he gave a synopsis of them in brief, putting in this list, however, only those which it seemed reasonable to regard as belonging to the category of congenital idiopathic dilatation. In a secondary list he mentioned briefly other cases which ought to be excluded, and gave the reasons for this exclusion. He reported in detail a case which had come under his own observation. Analyzing the symptoms of this case and of the cases of the first list mentioned, he reviewed the symptomatology, diagnosis, and treatment of the disease.

Dr. R. H. Fitz, of Boston, presented a paper on the relation of idiopathic dilatation of the colon to phantom tumor, and reported a series of cases for the purpose of suggesting the organic relation of certain cases of phantom tumors and of advocating resection of the sigmoid flexure as a desirable method of treatment of such tumors.

The Immediate and Remote Effects of Athletics on the Heart.—This was the subject of a paper read at the same meeting by Dr. Alfred Stengel, of Philadelphia. Athletics, he said, habitually caused some dilatation of the cardiac chambers at the time of indulgence in a trying sport. The degree of dilatation was more marked in the young and inexperienced than in those who were well trained. Occasionally, acute dilatation, sufficient to cause marked symptoms, was observed. Under these circumstances, a trained athlete might recover compensation within a few days. The effect of continued indulgence in severe sports was the development of some cardiac hypertrophy, and persons who had thus enlarged their hearts frequently suffered symptoms of overcompensation, at least during some years after they had ceased to follow athletics.

Kernig's Sign in Meningitis.—At the same meeting Dr. J. B. Herrick, of Chicago, read a paper in which he said that personal observations showed the sign to be so commonly present in meningitis that, though occasionally absent in this disease and occasionally found in other affections, it was a valuable diagnostic aid.

A Case of Periodic Family Paralysis.—At the same meeting Dr. John K. Mitchell, of Philadelphia, presented a study of the case of a boy of eighteen who had, at frequent but varying intervals, an attack of paralysis. He went to bed well but woke in the morning helpless, paralyzed from head to foot, with total abolition of skin, muscle, and tendon reflexes, loss of faradaic and galvanic contractility, unchanged sensibility, and unimpaired mind and speech. The attacks were hereditary in his mother's family, in which five cases were known. One of these had been seen by the author and the others were described. Careful studies of the electrical conditions and of the urine, the faeces, and the blood, with

attempts to determine their toxic effects, were given. The conclusion was that more than one kind of toxic material was produced, with selective actions on the skin nerves and on the spinal centres. The author added that only three other undoubted cases of like kind had been recorded in America and about sixteen in Europe.

A Case of Fatal Epistaxis, with a Study of the Blood, was the title of a paper presented at the same meeting by Dr. George Dock, of Ann Arbor. The patient was admitted into a hospital for epistaxis which had existed for six weeks. Local examination failed to reveal the cause of the hemorrhage. Notwithstanding treatment with plugging, etc., copious and repeated hemorrhages occurred in the hospital. The patient having been referred to the medical clinic for examination of the blood, conditions were found which did not explain the severe epistaxis, though the changes in the blood, if primary, might have accounted for hemorrhages, such as occurred later, in the retina, etc. There was a great diminution in the number of red blood-corpuscles, ultimately reaching 360,000 in a cubic millimetre. Nucleated red corpuscles were present in large numbers, and included all nucleated kinds, varying in proportion at different times. There was also moderate leucocytosis, and there were great alterations in the proportion to the various forms of the leucocytes. Post-mortem, a small endothelioma of the nasal septum was found, which had caused hemorrhages from both sides. Microscopic metastatic foci were found in various internal organs. Changes in the bone marrow were not marked.

Thyroid Extract in the Treatment of a Cerebral Case.—At the same meeting Dr. Starling Loving, of Columbus, related the case of a student, eighteen years old, of healthy parentage, whose history, with the exception of an attack of typhoid fever in his fifteenth year, had been uneventful. His habits were correct. In 1896, without assignable cause, he began to suffer from constant headache with severe exacerbations. Within six months he found his vision affected, soon to such an extent as obliged him to suspend his studies, and, later, to interfere materially with movement from place to place. Examination by competent oculists disclosed no lesion in either eye, though the vision was about equally affected in both. At a consultation between the oculists, a neurologist, and a surgeon, it was decided that the patient was suffering from an intracranial neoplasm, the nature and precise situation of which were not defined. There was a suspicion of its being of syphilitic origin. The lad was treated with mercurials and iodide of potassium with no beneficial result. After a rest of some weeks treatment was resumed, but it was futile. Tonics were used, but they did no good. Thyroid extract was prescribed, and its use was continued with a few short intermissions for several months. Improvement soon became manifest. The patient had now so far recovered as to be able to read and write with ease and comfort.

Perforation of the Stomach by a Foreign Body in an Infant Seven Weeks Old.—At the same meeting Dr. T. M. Rotch, of Boston, related the case of a male infant seven weeks old who was attacked suddenly with abdominal pain and vomiting. Symptoms of peritonitis developed and on the fourth day from the onset of the attack laparotomy was performed and the abdominal cavity irrigated. Three days later the infant died. The post-mortem examination showed a minute perforation of the stomach in which was found a small thread.

The Ohio State Medical Society.—The fifty-fourth annual meeting will be held in Springfield, on Wednesday, Thursday, and Friday, May 10th, 11th, and 12th, under the presidency of Dr. N. R. Coleman, of Columbus. In addition to the president's address, the programme contains the following papers: The Differential Diagnosis of Small-pox, by Dr. William Thomas Corlett, of Cleveland; Appendicitis, by Dr. Hugh F. Lorimer, of Fair Haven; How to Deal with the Appendix in Pus Cases, by Dr. William Hamilton, of Columbus; Why does the Surgeon Fail to find the Appendix? by Dr. N. Stone Scott, of Cleveland; When should the Physician Call in the Surgeon in Appendicitis, by Dr. Allen H. Vance, of Springfield; Surgical Appendicitis, by Dr. B. M. Ricketts, of Cincinnati; Fifty-seven Consecutive Abdominal Sections without a Death, with Clinical and Pathological Reports, by Dr. Hunter Robb, of Cleveland; Something about Phagocytes, by Dr. D. N. Kinsman, of Columbus; The Diagnostic Value of the Wint-lich Tracheal Sound, by Dr. C. F. Hoover, of Cleveland; Malingering in Ophthalmological and Aural Examinations, by Dr. W. H. Snyder, of Toledo; Gastric Disorders producing Constipation and Diarrhea, by Dr. John P. Sawyer, of Cleveland; Milk as a Carrier of Infection, by Dr. C. O. Probst, of Columbus; Some Medical Considerations concerning the Sale of the Drug Alcohol, by Dr. R. T. Trimble, of New Vienna; Shall the Manufacturers of Drugs do our Prescribing? by Dr. Daniel Milikin, of Hamilton; What should be the Attitude of the Profession toward Christian Science and other Fads? by Dr. John C. Oliver, of Cincinnati; The Prevention of Infection in and after Labor, by Dr. William H. Taylor, of Cincinnati; The New Economic Position of Woman in its Relation to Health and Vigor, by Dr. Mary J. Finley, of Mansfield; The Advisability of Operating in Private Homes, by Dr. Albert F. McVety, of Toledo; Vertigo, by Dr. Philip Zenner, of Cincinnati; The Regular and Periodic Disinfection of Railway Passenger Coaches and Street Cars, by Dr. Frank Warner, of Columbus; Medical Jurisprudence, with Needed Legislation, by Dr. David O. Brine, of Urbana; Observations on the Surgery of the Neck, based on Clinical and Experimental Evidence, by Dr. G. W. Crile, of Cleveland; The Relations of the General Practitioner and the Specialist, by Dr. P. J. Kline, of Portsmouth; Traumatic Cataract, by Dr. C. F. Clark, of Columbus; The Modern Advances in Therapeutics, by Dr. John V. Shoemaker, of Philadelphia; The Medical and Surgical Lessons of the Late War, by Dr. P. S. Comer, of Cincinnati; How the General Practitioner can Aid in the Advancement of Psychiatry, by Dr. E. G. Carpenter, of Columbus; Indications for the Normal Salt Solution, by Dr. E. W. Mitchell, of Cincinnati; How our Neighbors Practise Medicine, by Dr. John F. Fauster, of Paulding; The Symptomatic Treatment of Consumption, by Dr. B. F. Lybe, of Cincinnati; Digitals and the Heart, by Dr. G. M. Waters, of Columbus; The Laryngeal Manifestations of Typhoid Fever, by Dr. L. R. Lockard, Jr., of Toledo; Erythromelalgia, by Dr. William A. Dickey, of Toledo; The Ocular and Orbital Manifestations of Lesions of the Frontal Sinus, by Dr. Robert Sattler, of Cincinnati; Excessive Myopia: When may we Operate and what we may Expect, by Dr. Andrew Timberman, of Columbus; Some Practical Points in the Diseases of Women, by Dr. William M. Humiston, of Cleveland; Some Unusual Cases of Sarcoma of the Kidney, with a Point in Differential Diagnosis, by Dr. J. F. Baldwin, of Columbus; Essentials for Wound

Healing, by Dr. Charles Graefe, of Sandusky; The Practical Application of the X Rays in Surgery, by Dr. William J. Taylor, of Cincinnati; Cases of Obstruction Radically Treated, by Dr. Thomas C. Martin, of Cleveland; The Methods of Making and Closing Abdominal Incisions, by Dr. C. N. Smith, of Toledo; The Treatment of Fractures of the Patella, by Dr. W. J. Means, of Columbus; Edema and Elephantiasis of the External Genitalia following Removal of the Inguinal Glands, by Dr. C. A. Hamann, of Cleveland; and The Iris in the Operation of Cataract Extraction, by Dr. J. E. Brown, of Columbus.

An American Physician in Florence.—Dr. Winslow W. Skinner, formerly of New York and for several years a member of the staff of the *New York Medical Journal*, informs us that he is now the only American physician practising in Florence, Italy. An American who practised there for many years has disposed of his practice to a British physician and left Florence.

The German Medical Society of the City of New York.—At the next regular meeting, to be held in the Academy of Medicine's building on Monday evening, May 8th, Dr. Julius Wolff will show two patients with congenital unilateral paralysis of the abductors, with retractile and protrusive movements of the eye; Dr. J. W. Gleitsmann will show a person who has been cured of primary tuberculous disease of the pharynx and larynx by eighteen months' treatment; and Dr. Henry J. Wolff will read a paper entitled Experiences in Appendicitis.

The Late Dr. W. W. Van Arsedale.—The following memorial notice was adopted by the New York County Medical Association at its stated meeting on April 17th, and ordered to be published in the medical journals:

Resolved, That in the death of Dr. W. W. Van Arsedale the New York County Medical Association has lost one of its most accomplished members. In addition to a thorough academic education, Dr. Van Arsedale passed successfully through the long course of study required at the University of Leipzig, in Germany, from which institution he graduated with honors, and afterward served the required term of service in the great hospital of that city as pupil of, and assistant to, the distinguished Professor Thiersch. Returning to his native country, he located in New York city, became connected as an assistant to the chair of surgery in the New York Polyclinic Medical School and Hospital in the early days of its organization, and served with such faithfulness and proficiency that he gradually rose to the professorship of surgery, which position he filled with entire satisfaction and held at the time of his lamented death. He was also assistant surgeon to the New York Cancer Hospital. For four years before his death he had been assistant visiting surgeon to Mount Sinai Hospital, where his conscientious and thoroughly scientific work was fully appreciated, and where his loss will be keenly felt.

Dr. Van Arsedale was twice elected chairman of the Section in General Surgery in the New York Academy of Medicine, and was an earnest working member of the New York Surgical Society. He contributed many valuable papers upon scientific subjects to the various medical journals, and was justly considered one of the clearest writers of his day upon surgical topics.

[Signed.] JOHN A. WYETH, M. D., *Chairman*,
FRANCIS J. QUINLAN, M. D.,
A. ERNEST GALLANT, M. D.,
Committee.

Lithiated Johannis Water.—The *Medical Press and Circular* for March 15th remarks that a desideratum of lithia waters is that they should contain a definite and adequate proportion of a salt of lithium, and this it has found in lithiated Johannis, to each small bottle of which a grain of lithium bicarbonate has been added.

Genealogy.

The catarrhine ape,
As proved by his shape,
Is the source from which we sprang,
And however we may stick
At this antenatal trick,
We sprang from an orang-outang.

We may manifest rage
At the thought of the age,
And even ignore this feature;
But the anthropoid monkey
Is no greater flunky
Than many a human creature.

S. S. B.

Bequest to the Royal College of Physicians of London.—According to *Science* for April 21st, the will of the late Sir William Jenner bequeaths £10,000 to the Royal College of Physicians of London.

The New York Academy of Medicine.—At a stated meeting, on Thursday evening, the 4th inst., the following papers were presented for discussion: Anæmia as observed in Gynecological Practice, with Some Practical Suggestions as to Diagnosis and Treatment, by Dr. W. Gill Wylie; and The Present Status of our Knowledge of Chlorosis, by Dr. Thomas S. Southworth. Dr. W. H. Katzenbach, Dr. F. P. Kinnicutt, Dr. M. Manges, Dr. J. Ewing, and others took part in the discussion.

At the next meeting of the Section in Surgery, on Monday evening, the 8th inst., Dr. J. E. Kelly will read a paper entitled An Original Method of Closing a Biliary Fistula after Cholecystectomy, and Dr. Charles N. Dowd will present two patients with tuberculous epiphysitis without involvement of the joint.

At the next meeting of the Section in Genito-urinary Diseases, on Tuesday evening, the 9th inst., Dr. Ramon Guitéras will read a paper on Bottini's Operation for Prostatic Hypertrophy, with a Report of Cases. Cases will be reported, and new instruments and specimens will be exhibited.

At the next meeting of the Section in Pædiatrics, on Thursday evening, the 11th inst., the following papers will be read: The Frequency of Otitis in the Exanthemata and the Indication for Early Interference, by Dr. Charles H. May; Mastoid Complications in Otitis of the Exanthemata, by Dr. Edward B. Dench; and Otitis of the Exanthemata from the Standpoint of the Pædiatrician and General Practitioner, by Dr. J. Henry Fruit-night. Patients will be presented and new instruments will be exhibited.

The Medical Review.—The *Medical Review* of St. Louis has changed hands, having been purchased by Dr. Heman W. Loeb of that city, who, as editor, will continue its publication.

A Consolidation of Kansas City Journals.—The *Kansas City Medical Index* and the *Kansas City Lancet* have been consolidated. Dr. John Panton is the editor of the journal thus formed.

Original Communications.

PHOCOMELUS OF THE HUMERUS
IN EPILEPSY
AS A STIGMA OF DEGENERATION.

WITH REPORT OF TWO CASES.*

By L. PIERCE CLARK, M.D.

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MEMBER OF THE NEW YORK NEUROLOGICAL SOCIETY;
FELLOW OF THE NEW YORK ACADEMY OF MEDICINE;
MEMBER OF THE NEW YORK PATHOLOGICAL SOCIETY, ETC.

As a prefatory remark, before speaking of the special title of this paper, I wish to say that if the frequency and number of stigmata found in any disease are a sign of its degree of degeneracy, then we find epilepsy taking front rank with idiocy and imbecility. It is certainly a much more degenerative disease than the ordinary insanities. In an examination of over four hundred cases of epilepsy for various stigmata at the Craig Colony, I was struck with the remarkable frequency of asymmetry of hard and soft parts. Slight asymmetries are very frequently found in the normal state, therefore only the most marked conditions were counted as stigmata.

As to what defect in development stigmata may be dependent upon, and as to what relative value should be given them, singly or collectively, from a clinical point of view, does not immediately concern us in this paper. Such questions still remain in the domain of conjecture or hypothesis.

Remarks on Defects of the Humerus as a Degeneration Stigma in Epilepsy.—Information on this point ought to be found in one or more of half a dozen independent lines of research. These are general anatomy, anthropology, abnormalities, monstrosities, degeneration stigma, and, finally, epilepsy proper.

Under the head of anatomy we find a good deal on what is termed asymmetry within normal limits, and statements are made to the effect that half or three quarters of an inch difference in the length of the two humeri may occur simply as a natural variation. That is to say, the right humerus is naturally a very little longer than the left—probably from right-handedness—and the limit of this variation might reach the exceptional extent of half or three fourths of an inch. Hence a variation of this sort would not necessarily be a stigma if found in an epileptic. In the case of Raymond and Janet the shortening of the humerus was only one centimetre.

The writer has had some misgivings about the title of this paper. He uses the term phocomelus, a shortening of the extremity, from its derivation, not in its application to monstrosities, as we may have no right to say that a defect of several inches of the humerus should be classed as a phocomelus; the fact being that in liter-

ature phocomelus is a pure "monstrosity," while defect of the humerus is only an "abnormality." The two have entirely different literature and affinities. Monsters seldom live, and hence the literature of monstrosities is principally made up of autopsies. On the other hand, abnormalities are usually described in the living, and probably there are as many adults as children represented. In looking over monstrosities in literature, the number of individual varieties is so great that I see no trace of any attempt to study any one variety in connection with any outside subject like epilepsy. Phocomelus seems to receive rather less attention than many other varieties—ectromelus, for example, polydactylia and syndactylia, etc.—which seem fairly common. Virchow has recently written on phocomelus, but the work is not at hand.

With regard to the consideration of monstrosities as a whole in relation to epilepsy, the only reference I have been able to find is Zuccarelli, who makes no mention of the conditions.

The literature of abnormalities is very large, and the classification of "abnormalities of the extremities" in the *Index Medicus* contains many titles; but it is very obvious that the humerus has far fewer abnormalities than some of the other long bones, and the few instances I have been able to find make no mention of epilepsy or of outside matters in general.

The literature of degeneration stigmata is of recent date, and the Italian school seems to have done most of the work here, but the large work of Tonnino on *Epilepsy and Degeneration* is the only monographic treatment of the subject. We have no mention of shortening or defect of the long bones discussed in this book.

The literature of practical anthropology, or rather anthropometry, is considerable, and appears to have received an impetus from the Bertillon method of identification, and to be favored specially by the French. Thus Bourneville has measured his epileptics carefully for twenty years, long before degeneration stigmata were recognized by the profession as a whole. In spite of Bourneville's frequent allusions to asymmetry of the skull, face, etc., there is nothing to show that he suspected anomalies of the long bones as accompanying epilepsy. He speaks of *asymmetry*, but not of *defects* or *monstrosities*. Here, the other, again, a stigma appeared hardly to recognize these matters, even in his earlier works, and only in *Les épileptiques* he finally admits that shortening of the humerus is a stigma of epilepsy. He gives measures of forearm bones, but I am sure we have had reference to the same matter in a photograph by Dr. Peterson, as I have seen that one of his cases in the 1890 book, and he has exhibited any shortening.

Coming now to the subject of this paper, we have gone over the literature for a number of years back and have consulted the leading authorities freely, but the

* Read before the Section in Pediatrics of the New York Academy of Medicine, December 8, 1898.

only recorded case deliberately reported of shortening of the humerus as a degeneration stigma of epilepsy is the one published by Raymond and Janet, and here the shortening is so slight that it could hardly be placed in the same category with the cases which I shall report in this paper.

Hence we are forced to conclude that if any other cases exist they should be found in the works of Tonnino and Zuccarelli, or else are mere casual and incidental mentions scattered aimlessly in literature and having little value. German, English, and American authors are certainly less inclined, as a rule, to do justice to subjects of this kind. Thus Oppenheim, Sachs, and other writers either ignore or barely allude to the occurrence of stigmata, etc.

*Case of Shortening of the Humerus as a Degeneration Stigma in an Epileptic.**—This epileptic is a girl of nineteen years. There is almost complete asymmetry of the body. Skull irregular, left side of face less developed, left side of thorax smaller.

The two arms vary in length. On the left side the distance from acromion to epicondyle is twenty-eight centimetres to twenty-nine centimetres on the right side. The two forearms are also asymmetrical to the same extent.

This shortening, while insignificant, is enough to show in a photograph. There is corresponding shortening in the lower extremities. Patient looks in the photograph as if she had had hip disease.

Age when first had fits, sixteen years. Father's sister epileptic. I do not consider this case above suspicion of being dependent upon an organic brain lesion, so often seen in the various cerebral palsies of the young.

FÉRÉ.—On account of his eminence and the voluminous character of his writings, we expected to find something on stigmata which would illustrate the matter of defects of long bones.

In his chapter on Diagnosis of the Predisposition (*Épilepsie*, etc., 1890) he says that recognition of asymmetry began with Lasègue, but that he did not go beyond the head and face.

Vielle, in 1878, wrote on epilepsy associated with malformations, and gave measurements of hands and feet. (Not in New York Academy.)

In 1885, Zuccarelli gave measurements which showed asymmetry of the thorax in epileptics.

It is evident that up to 1890 Féré had no definite knowledge of shortening of the limbs as a stigma of epilepsy; but in *Twentieth Century Practice* he gives among the stigmata of epilepsy "shortening of the limbs." This is the only allusion he makes to this subject.

BOURNEVILLE AND ASSISTANTS.—On account of the pioneer and exhaustive work done by or through Bourneville on all the peculiar features of epilepsy, and especially because of the system of measure-

ments which he has carried out for years, we expected to find some data as to defect, etc., of the long bones. In the many histories which he gives in detail, the length of the humerus is universally recorded. He states over and over that "there was no inequality," or perhaps a very slight difference in favor of the right bone.

In perhaps a half-dozen cases, Bourneville records a high degree of *progressive* shortening consequent upon hemiplegia with which the epilepsy was associated. While this sort of shortening bears no relation to defects which are congenital stigmata, it may be of interest to give a few of these cases on a separate page. Such cases are frequently seen by the neurological observer, and should not be confounded with the subject of the writer's paper.

Outside of these cases we find absolutely nothing touching upon the matter in question.

Cases of Shortening of Humerus due to Paralysis.—

Bourneville: * Child of ten years with pseudoporencephaly, left hemiplegia, partial epilepsy. Length of right humerus, twenty-eight centimetres; length of left humerus, twenty-five centimetres. One year earlier the right humerus was only 0.5 centimetre longer, a gain of 2.5 centimetres in a year.

Bourneville: † Idiot with right hemiplegia and consecutive epilepsy; hemispherical cerebral sclerosis.

* In 1879, right humerus, thirty-two centimetres and a half; left, thirty-two centimetres. In 1886, right humerus, thirty-seven centimetres and a half; left, thirty-two centimetres and a half. There is, therefore, a shortening of two inches.

Other similar cases are found in Bourneville's work, but these two are much the more striking.

ITALIAN AUTHORS.—Since the work done by Lombroso on degeneration stigmata in criminals, epileptics, etc., it is but natural to expect to find something bearing on defects of the long bones, etc., in the work of his disciples. He himself does not discuss anything to the point. In 1891 Tonnino published a book of 324 pages on the relations of epilepsy to degeneration.‡ The work is briefly reviewed by Seppilli in the *Revista sperimentale di freniatria*, 1890, and no reference in the original or in the review appears upon bones.

Donaggio contributes an article on development of the limbs, etc., in epilepsy in the *Revista sperimentale di freniatria* for 1891, but refers only to the muscular development. He gives numerous measurements of the circumference, the length being ignored.

In 1885 Zuccarelli wrote on asymmetry of the thorax in epileptics.

In 1898 the same author, or one having the same name, published an article on "human monsters and epilepsy" (*mostri umani ed epilessia*) in an Italian periodical called *Anomalo*, which has been in existence

* Raymond and Janet. Malformation des reins en pinces "de beurnard" et asymétrie du corps chez une épileptique. *Nouvelle iconographie de la Salpêtrière*, No. 9, 1897.

* *Recherches sur l'épilepsie*, 1895, Case VI.

† *Recherches*, etc., for 1896, Case VII.

‡ *La epilessia in rapporto alla degenerazione*, Torino, 1891.

eight years. The academy has no file of this periodical, which is devoted rather to anthropology, biology, etc., than to medicine. It is published at Naples (1898, vol. viii).

MISCELLANEOUS.—Virehow has recently published an article on Phocomelus (*Die Phokomelen*, etc.) in the *Transactions of the Berlin Anthropological Society* for 1898. (Not in the academy.)

Asymmetry of the Humeri as an Anthropological Fact.—Guldberg, a Scandinavian, considers this question from a purely physiological standpoint, nothing being said of degeneration.*

Arnold found the right arm longest in eighty-seven per cent. In only one case out of sixteen was perfect asymmetry present.

Krause found the right arm (upper arm) four per cent. longer than the left.

Rollet, in a hundred men and women (fifty of each), found but two cases of symmetry of humeri. In three cases the left humerus was the longer, while in ninety-five the right was longer. Average difference, five millimetres. It is not uncommon to find seven or eight millimetres, while even such disparity as 1.2 centimetre and 1.8 centimetre was recorded without being looked upon as pathological.

Von Hasse examined over five thousand soldiers. In seventy-five per cent. the right humerus was longer and the left in nine per cent. As a rule, the left humerus was longer in left-handed people, but there was one exception.

The latest writer on this subject before Guldberg was Matiezka.† He sums up as follows:

1. In adolescents the extremities are frequently symmetrical in length. The right is usually the longer, especially in the male.

2, 3. In the adult symmetry is rare, the right side having the preference, as before.

Several of the writers cited by Guldberg, and including the latter, evidently believe that the weight of the bones is a better test of preponderance than the length. They carefully record the weight of the humerus in all researches on the skeleton.

In regard to these cases which I shall present, noting the frequency of Little's disease and infantile cerebral palsy, one should not be led to class such cases with phocomelus, especially those infantile types in which the arm remains paralyzed while the other parts of the hemiplegia have recovered more or less. No sensory or motor disorder is present in either case in the arm showing phocomelus.

The first case was shown in photograph by Dr. Fredrick Peterson, of New York, in his article upon *Stigmata of Degeneration*, published in *State Hospitals Bulletin*, July, 1896, but since the case has come under my

observation I find he barely mentioned the possibility of the condition without giving any history or measurements of the case. I take this opportunity to place the case regularly on record.

The case is one of double interest, as the side opposite phocomelus has been hemiplegic from early infancy, a fact which Dr. Peterson did not report.

The history and description of the case is as follows:

CASE I.—L. S., a girl, aged nineteen years; of Irish parentage, single, and of no occupation. Has had epilepsy since three or four years of age (exact year unobtainable). Father intemperate and mother had rheumatism. Patient is seventh child in family of three girls and four boys. Mother died of phthisis at forty-one years; father died of unknown disease at fifty-three.

Patient was a full-term child; delivery was instrumental, and labor was prolonged. Patient was injured on left side (probably birth palsy) and had several convulsions after birth. She was subject to "fits of crying spells" from infancy, and when dentition began at three months of age she had great difficulty in digestion and malassimilation. Several convulsions occurred at this time also. She began to walk at fifteen months, but suffered for two or three years of early life from suppurating scrofulous glands in the neck.

When about three or four years of age she had several severe convulsions which ended in left-sided hemiplegia; afflicted also with mobile spasm of an athetotic character. The second attack occurred about two months after the first. Her attacks for many years were confined to the left side, and always began there. She occasionally has what the French writers term partial epilepsy, which is as follows:

Four attacks of the same general character occurred April 6th while at the colony. Attacks began with convulsions in left side of face, unattended by the epileptic cry. Her head was drawn to the left, then the tonic spasm was changed to clonic spasm; eyes were wide open and staring, while pupils slowly and widely dilated. The hands were not clinched or even closed during the attack. Convulsive movement was confined to left side of face. Following the convulsion copious frothing at the mouth took place. The unconsciousness following convulsion lasted but a few seconds. Her seizures are generally of grand-mal type, mostly confined to left side, although usually general after invasion is complete. Her attacks are almost always preceded by epigastric aura, a fact fully recorded by flowers—viz., that hemiplegic epileptics may after a time develop aura similar in all respects to those occurring in diphtheries. She has had as many as seventeen fits in twenty-four hours.



Physical examination showed a general poor physique; body poorly nourished, left internal strabismus;

* *Norsk Mag f Lægevidensk.*, 1897.

† *Ueber Asymmetrie d. Extrem.* *Prag med Wochen*, 1896.

pupils dilated; left pupil larger. Breath was foul; she was constipated and showed marked symptoms of bromic poisoning. All deep reflexes were exaggerated on left side. Right arm was in all respects normal except as to length. Measurements are given at end of report of this case.

We must remember that we are not comparing the shortening of this humerus with a normal one, but with a defective development of a left hemiplegic of three or four years of age. The comparison would be much more striking if it were as in Case II, to follow. Both patients are ambidextrous and equally strong right or left. The physiological compensation of throwing the right shoulder forward to make up the shortening of the right humerus is present in both cases.

The mobile spasm in this case at times closely resembles true athetosis, as so well described by Hammond and illustrated by Strümpell. Intentional movements of the hemiplegic extremities are always overacted; this is also apparent even in the face in emotional and volitional acts. Athetoid movements are most typical in the thumb and big toe of left side. The patient presents the customary mental weakness of a hemiplegic and epileptic. The writer's attention was directed to the possible explanation of the phocomelus in this case upon the basis of a prenatal palsy or some intra-uterine injury. Such an injury could hardly fail of attention by the mother and family. No history of such was obtainable. Again, in regard to the first explanation urged by a colleague, in no instance of Little's disease, or that of a cerebral hemorrhage at birth, do the parts maintain their former freedom of movements; there is either flaccidity or contracture.

Measurements: Weight, 101 lbs.; Height, 5 ft. 3½ ins.

	Right.	Left.
Dynamometer.....	42 kilo- grammes.	38 kilo- grammes.
Length of humerus.....	9 inches.	12½ ins.
Length of ulna.....	9	9
Length of radius.....	8½	8
Length of hand.....	7	7
Length from anterior superior spinous process of ilium to internal malleolus.....	31	30½
Length of foot.....	8¾	8¾
Circumference of arm.....	8¾	8¾
Circumference of forearm.....	7¾	7¾
Circumference of hand at knuckles (in extension).....	7	6½
Circumference at gluteal fold, looping to anterior superior spinous process.....	23½	22½
Circumference above knee.....	11½	11½
Circumference at calf.....	11½	11
Circumference of foot at internal cuneiform and metatarsal articulation.....	7¼	7¾

The history and description of Case II are as follows:

CASE II.—A. A., a woman, aged twenty years; nativity, United States; single; no occupation. October 6, 1898, she was admitted to Craig Colony suffering from epilepsy dating from eighteen years and a half.

Family History.—Aside from deaf-mutism in a paternal uncle, and consumption and rheumatism in mother, the family history was good or negative. The patient is the sixth child in a family of seven, five girls and two boys. The two boys died; one of diphtheria at two, the other of cholera infantum. No history of trauma or complication during her mother's pregnancy. Patient was born at full term, and was a

healthy child. No instruments were used, and labor was not prolonged. Nothing unusual of right side was noticed until two years of age, when the knee became very painful, swelled, and she was unable to use it. After a period of several months (two years?) contracture and rigidity necessitated a tenotomy of the Achilles tendon; a year after this operation another was necessary, and an amputation just above the knee was done. This condition was in all probability tuberculosis, from the relatives' description. The right arm became an object of attention at this time, and the surgeon said probably the arm was paralyzed once. This explanation proved convenient until the family physician said rightly that such an explanation was impossible in view of the fact that the patient still maintained such perfect use of the limb. No further explanation or comment was made until she was brought to my attention at Craig Colony, when, from the examination of the case, I judged her worthy of a somewhat lengthy report. Patient has one sister who is of short stature; aside from this, no such phenomenon was ever present in the family, even if this fact has any bearing on her abnormality.

History of Epilepsy.—Her epileptic seizures at first were *grand mal* in form, occurring every two or three months; now they are lighter, of *petit-mal* type, but generally convulsive, occurring every five or six days. She has never had any warning before fits, which generally occur in the early morning hours. She is bright and capable physically, notwithstanding she was not able to learn at school and uses crutches to get about.

Physical Examination.—Physical examination mostly negative. Of good physique; nutrition well maintained. Left pupil was found much larger than right; vision was poorer in left than in right. Super-

Measurements: Weight, 95½ lbs.; Height, 5 ft. 4½ ins.

	Right.	Left.
Dynamometer.....	45 kilo- grammes.	43 kilo- grammes.
Length of humerus (acromion to external condyle).....	7½ inches.	12 inches.
Length of forearm (external condyle to styloid process).....	10	10
Length of forearm (internal condyle to styloid process).....	9½	9½
Length of hand.....	7¼	7¼
Circumference of biceps (largest part).....	9¾	9¾
Circumference of forearm, below elbow.....	8¾	9¾
Circumference at wrist.....	5¾	6
Circumference of hand at knuckles (in extension).....	7½	7¼
Length, anterior superior spine to internal malleolus (Amputation above knee of right.).....		32½
Length of foot.....		9½
Circumference at gluteal fold, looping from anterior superior spinous process of ilium.....		22½
Circumference above knee.....		12½
Circumference at calf.....		11½
Circumference at ankle.....		7¼
Circumference at internal cuneiform and metatarsal articulation.....		8



ficial and deep reflexes apparently uniformly normal. On examination of the shortened humerus it was found that the condyles were much enlarged and protuberant. The lower part of the bone had apparently suffered as much as the shaft in the process of dwarfed development. The lines running from shaft to condyles were proportionately shortened. Probably this latter fact accounted for the muscular atrophy or lack of development of the supinators and flexors of the right arm. The line to internal condyle was a little shorter than that to external condyle.

INHIBITION.*

By S. J. MELTZER, M. D.

INHIBITION means a temporary diminution or abolition of a vital activity brought about by an external or internal stimulus. The prototype of this phenomenon is the cardio-inhibitory effect of stimulation of the peripheral end of the pneumogastric nerve. Although numerous instances of inhibitory processes have been unearthed since the cardiac inhibition was first discovered, now a little over half a century ago, inhibition has not yet occupied a proper place in biology. Used only vaguely in psychology, and used arbitrarily and indiscriminately in clinical medicine, the phenomenon of inhibition is distrusted in physiology, had to fight on general grounds at every step for the establishment of any new fact, and has still to fight for recognition as an independent vital force. It is a characteristic and instructive incident in the history of our subject that a famous physiologist clearly saw cardiac inhibition long before its discovery, but dismissed it simply as an error of observation.

A. W. Volkmann (1), in 1838, while systematically examining all the branches of the pneumogastric nerves in the frog, reported among other facts that in one instance the heart was beating twenty times to the minute. After stimulating the peripheral end of the vagus the heart stood still for a minute and a half, and then started beating again twenty-six times to the minute. Volkmann, who was only anxious to know whether the cardiac vagus contained motor- or sensory-nerve fibres, set the incident down then as something very curious. Four years later (2), while writing on the fallacies of certain experiments, Volkmann briefly dismissed these observations of his as invalid. But the brothers Weber (3), only three years later, when making the same observation, recognized it as a new phenomenon and named it inhibition. The failure of Volkmann to properly interpret the phenomenon, as well as the vehement resistance which was offered by many well-known physiologists to the interpretation given to the phenomenon by the brothers Weber, was based, implicitly, or avowedly, upon the well-founded principle that no phe-

nomenon should be acknowledged as presenting a new type of facts unless all attempts to explain it by facts already known proved to be futile. The history of such attempts is quite interesting. Schiff (4), Budge (5), Moleschott (6), and others, for many years insisted that the vagus was the motor nerve of the heart, but it was so sensitive that any artificial stimulation fatigued it at once. Hence the diastolic standstill. When Pflüger (7) discovered the inhibitory effect of the splanchnic nerve upon intestinal peristalsis, Schiff (8) again offered fatigue as the explanation of the inhibitory effect.

Goltz (9), who, when Rosenthal (10) described the inhibitory influence of the superior laryngeal nerve, exclaimed, "Let us resist the flood of inhibitory nerves," but afterward enriched our knowledge of reflex inhibition with a great number of facts, offered (11) in essence as a real explanation of the central inhibition, that the new stimulus fatigued the centre. Again, when Houbnoff and Heidenhain (12) reported that certain stimuli applied to the cortex caused a relaxation of tonically contracted muscles, which the authors considered as an inhibitory action, H. Munk (13) suggested that the applied stimulus might have caused the exhaustion of the nerves. Next to fatigue, it was the vaso-constriction which was discarded against inhibition. Brown-Séquard (14) suggested that the vaso-constriction of the coronary arteries might be the cause of the standstill of the heart; Rosenbach (15) offered the hypothesis that the vaso-constriction of the blood-vessels of the medulla might be the cause of the respiratory inhibition; and S. Mayer and von Basch (16) attributed the arrest of the peristalsis to the anemia caused by the stimulation of the vaso-constrictors within the splanchnic. I wonder that this theory was not extended to the vaso-dilators; these nerves, it could be said, were nothing else but constrictors of the vaso vasorum.

Munk (17) and Schlösser (18) introduced into the discussion the suggestion that many of the inhibitory effects were only apparent, caused by the counter-contraction of the antagonistic muscles, a state which they stamped with the term pseudo-inhibition.

When Fick (19) reported that a muscle which was in a state of maximal contraction by a natural impulse relaxed when an electrical stimulus was applied to it, which Fick considered as an instance of reflex inhibition, Waller (20) insisted that this was caused simply by the contraction of the antagonistic muscle, in spite of the assertion of Fick to the contrary.

While the fatigue and the vaso-constrictor hypotheses have been gradually abandoned, mostly by their originators themselves, the reason of pseudo-inhibition is still welded in a general way by the opponents of inhibition.

It is the object of this paper to give a review of the facts of inhibition as they have been found in all the systems of the living body, and to discover of the

* Read before the New York Academy of Medicine, January 19, 1899.

effect of the vagus upon the heart, thus enabling us to pass judgment upon the place to be accorded to the phenomenon of inhibition among the fundamental manifestations of living matter. So far as I know, it is the first attempt of that kind, and I shall have to ask for your indulgence with the shortcomings of this paper, of which, I am sure, there will be an abundance.

In presenting the facts I shall not follow the historical line, but shall try to group them according to their relation to certain systems, beginning, *ad libitum*, with the digestive system.

Inhibition in the Gastro-intestinal Canal.—The best-known inhibitory phenomenon in the gastro-intestinal canal is the effect of stimulation of the peripheral end of the splanchnic nerve upon the peristalsis of the small intestines, which was discovered, as stated above, by Pflüger (21). He stimulated the spinal cord and observed the arrest of the peristalsis. The stimulation had no effect when the splanchnic nerves were cut; but then he obtained the same result when the peripheral ends of these nerves were stimulated. When later the presence of the vaso-constrictors in the splanchnic nerves was discovered, it was suggested by S. Mayer and S. von Basch (22) that the arrest was not due to an inhibitory impulse, but to the anaemia of the intestines brought about by the considerable constriction of the small arteries. However, Van Braam-Houckgeest (23) has demonstrated that the inhibitory effect is entirely independent of the changes in the circulation. Ehrmann (24) went a step further in the analysis of the inhibitory effect, inasmuch as he was led by certain experiments to make the assertion that the stimulation of the splanchnic nerve caused inhibition of the circular and contraction of the longitudinal muscle fibres. Courtade and Guyon (25) have recently stated that the normal effect of the stimulation of the splanchnic nerve is just directly opposite to that alleged by Ehrmann—*i. e.*, that the circular fibres contract and the longitudinal fibres relax. The same authors, however, admit that after the animal's death they, too, have observed facts similar to those described by Ehrmann. However this may be, it is quite sure that the splanchnic nerve contains inhibitory as well as motor nerve fibres for the small intestines, but that with artificial stimulation the effect upon the first set of fibres seems to predominate. Courtade and Guyon (26) have also reported that the abdominal sympathetic contains inhibitory fibres for the large intestines. Pal (27) reported recently that stimulation of the spinal cord even below the centres for the splanchnic nerves caused inhibition of the intestinal peristalsis. Ehrmann (28) has made the further assertion that stimulation of the peripheral end of the vagus causes the relaxation of the longitudinal and contraction of the circular muscle fibres of the small intestines, just the reverse of the effect which is brought about, according to the same author, by stimulation of the splanchnic. It is the peculiar relation of both nerves to both mus-

cular coats of the intestines which von Basch and his pupils term crossed innervation. Besides Ehrmann, also Morat (29) and Bechterew and Mislawsky (30) are to be quoted among those who believe that the vagus contains some inhibitory nerve fibres for the intestines. The majority of the numerous writers on this subject speak only of the presence of motor fibres in the vagus, and the latest investigators, like Courtade and Guyon in France and Bunch (31) in England, assure us that they have never observed any effect upon the intestines following the stimulation of the vagi.*

Another pupil of von Basch, L. Fellner (32), has described also for the rectum the mechanism of the crossed innervation. According to Fellner's statement, stimulation of the hypogastric nerves causes contraction of the circular and relaxation of the longitudinal muscle coat of the rectum, while stimulation of the nervi erigentes causes just the reverse—contraction of the longitudinal and inhibition of the circular muscular coat. Exner (33) has made some criticism upon the conclusions of Fellner, believing that certain mechanical factors were not taken into consideration. Fellner (34), however, repeated his first experiments under new precautions and obtained the same results as before. Gaskell (35) states that he has examined this question and entirely indorses the conclusions of Fellner. On the other hand, Langley and Anderson (36) remark that they have not been able to confirm Fellner's statement with regard to the crossed innervation, though they have not disproved it either. However, these latter observers themselves, in a careful study of this subject, have established the facts that in rabbits, for instance, the lumbar nerves contain inhibitory fibres for the descending colon and rectum, and in the sacral nerves inhibitory fibres are present for the internal sphincter ani and for the muscles of the skin in the anal region.

For the pylorus, Oser (37) has found in two series of experiments that stimulation of the peripheral end of the splanchnic nerve opens it when it is contracted, and that stimulation of the vagus contracts it when it is relaxed. Oser reports further that stimulation of the splanchnic nerve abolishes the peristalsis of the stomach, while the stimulation of the vagus starts it anew. With regard to the inhibitory effect of the vagus upon the stomach, certain experiments which have often been successfully repeated upon the frog are of special interest. If the medulla oblongata is destroyed, or the vagi are cut, a lively peristaltic movement in the stomach puts in an appearance. These experiments are usually ascribed to Goltz (38), who, indeed, published them in 1872.

* The latest writers on this subject, Bayliss and Starling, in the *Journal of Physiology*, vol. xxiii, *Proc. of the Phys. Soc.*, p. ix, state that the typical effect of stimulation of the vagus upon the intestinal peristalsis is, first, inhibition alone, then inhibition plus augmentation, and, finally, after cessation of stimulus, an immediate and great augmentation.

I wish, however, to state here that these experiments, with exactly the same results, at least so far as the destruction of the medulla and section of the vagi are concerned, were published by A. W. Volkmann (39) in 1841, thirty-one years before Goltz. The appearance of a movement after the section of the vagi, in a stomach previously at rest, seems to indicate that in a normal state these nerves exert an inhibitory influence upon the stomach. Volkmann, of course, could not at that period think yet of inhibition. Goltz, to whom this interpretation suggested itself, indeed, refused to entertain it, on the peculiar ground that he could not conceive the idea that one and the same trunk could contain inhibitory as well as motor-nerve fibres. The truth is, as I may remark already here, that in the majority of the inhibitory phenomena some or most of these nerve fibres are found in the same nerve trunk with the motor fibres. Therefore, Contejean (40), Steinach (41), and others who have studied the above-quoted experiments, have indeed accepted the interpretation that the vagus contains inhibitory nerve fibres for the stomach. Morat (42) and Wertheimer (43) have obtained inhibitory effects upon the stomach from the central end of one vagus when the other vagus was intact. The direct stimulation of the peripheral end has given to many observers unsatisfactory results. I may be permitted to report here very briefly the method by which I have been enabled to observe the inhibitory effect of the vagus upon the stomach in dogs. When in a well-anesthetized animal with a perfectly quiet stomach the peripheral end of the vagus is stimulated with induction currents, a long, latent period passes by before well-marked contractions of the pyloric part of the stomach put in an appearance; the contractions continue for some time after the interruption of the stimulation. If now, while the contractions from the after-effect of the preceding stimulation still continue, a new stimulation of the vagus is set up, we see a quick diminution or entire disappearance of the movements during the latent period; which means that during the latent period preceding the motor effect of the stimulation an inhibitory effect is exerted upon such movements as are then present.

For the cardia, Kronecker and myself (44) have established the fact, for rabbits at least, that at the onset of each deglutition the cardia, which is usually tonically contracted, becomes perceptibly relaxed—i. e., the tone of the cardia is diminished, inhibited. When many deglutitions follow one another in rapid succession, the tonus may be entirely abolished. This relaxation takes place even when the œsophagus is severed, but disappears when the vagi are cut, which goes to show that the relaxation is a genuine nervous phenomenon of central origin, and not simply a mechanical effect. In connection with our observations von Oppenhow (45) also describes nerve twigs of the vagi in the proximal part of the cardia, from one of which he obtained by stimulation of

contraction, and from another he obtained relaxation of the cardia.*

Also for the peristalsis of the œsophagus which regularly follows each deglutition, Kronecker and myself (46) discovered the presence of a marked inhibitory effect at the very onset of each deglutition. In human beings it was previously established that the contraction of the upper part of the œsophagus set in 1.2 of a second, the middle part three seconds, and the lower part six seconds after the beginning of the deglutition. This is the stable rule after each single deglutition. If, however, a number of deglutitions follow one another at short intervals—for instance, of less than three seconds—no contraction appeared in the middle and the lower section of the œsophagus after each deglutition except in proper time after the last deglutition. This means that each consecutive swallow inhibits the appearance of the peristalsis in the middle and lower part of the œsophagus which were bound to come after each preceding swallow. The same occurrence takes place in the deglutition of dogs and rabbits. And as it was shown by other experiments that the cause of peristaltic movements of the œsophagus was located, at least under normal conditions, not in the œsophagus but in the centre of deglutition in the medulla oblongata, we have to assume that the inhibition, too, takes place within the medulla—i. e., that we have here before us the phenomenon of central inhibition. I shall add that further experiments have shown that apparently the afferent inhibitory impulses are carried to the centre by some fibres of the glosso-pharyngeal nerve (47). It deserves to be especially pointed out that in these observations it was proved for the first time that inhibition is an integral constituent in the normal activity of a function. In all the other experiments the inhibition was brought out by artificial stimulation of a nerve or tissue, which only suggests, but does not prove, that the inhibition is actually participating in the normal mechanism.

The numerous instances which I have just recited demonstrate the important fact that inhibitory nerves or inhibitory effects have been shown, through the labors of numerous investigators, to be present for the movements of the entire alimentary canal from the mouth to the rectum.

Inhibition in the Circulatory System.—We now turn our attention to the circulatory system. The most important inhibitory phenomenon there is, of course, the effect of the stimulation of the peripheral end of the vagus upon the heart. Stimulation of moderate intensity diminishes the tonicity of the heart muscle, reduces the systolic contraction, and lengthens the diastole; stronger stimulation causes a perceptible fall of the heart in diastole. In connection with this there is, in many animals at least, a tonic action of inhibitory fibres

* Very recently E. A. Key (Z. Anat. u. Entw. Gesch., p. 1871) has demonstrated in an interesting way the presence of the vagus of inhibitory nerve fibres for the cardia in the rabbit.

of the vagus—i. e., inhibitory impulses are constantly transmitted from the medulla to the heart; the centre of this tonus is apparently in the proximity of the nucleus of the vagus. Certain peripheral reflexes to the cardio-inhibitory centre increase the inhibitory influence upon the heart. A noteworthy instance of this kind of reflexes is the well-known stroke experiment (*Klopfersuch*) of Goltz (48). If the abdomen of a frog is struck with a scalpel or a similar instrument, the heart stands still in diastole, if the vagi are intact. It should be mentioned that about twenty years after the discovery of the cardio-inhibitory nerves, the much-looked-for motor-nerve fibres of the heart were finally found [Bever and von Bezold (49) and Cyon brothers (49)]; they are the accelerating or augmentor-nerve fibres which in the dog are to be found in the loop between the first thoracic and the last cervical ganglion. When stimulated there, the accelerating effect is quite marked; but in the frog, where the augmentor fibres are, together with the inhibitory nerves, in the trunk of the vagus, the stimulation shows only the inhibitory effect, and the presence of the augmentor fibres can be recognized only after the cessation of the stimulation, by virtue of their long after-effect [Heidenhain (50)].

Regarding the blood-vessels, we may now assert that vaso-dilators are present all over where also vaso-constrictors can be found. Both kinds of fibres often run in the same trunk, and the effects of the dilators are concealed by the overpowering effects of the constrictors. In some places, however, nerve trunks can be found which contain only vaso-dilators. The chorda tympani, for instance, contains, as was discovered by Claude Bernard, the vaso-dilators for the submaxillary gland; the stimulation of the peripheral end of this nerve changes the color of the gland, and increases considerably the flow of blood from the veins so as even to attain a pulsating character [Claude Bernard (51)]. The vaso-constrictors for this gland are present in the cervical sympathetic [Bernard (52)]. The relations of these two nerves to one another, which have been studied by von Frey (53), are the exact reverse of the relations existing between the vagus and augmentor nerves with regard to the heart, and are extremely interesting with regard to the question of inhibition, which, however, can not be discussed here. The vaso-dilators are nothing else but nerves which can inhibit the contraction of the circular muscle fibres caused either by the vaso-constrictors or by the tonus present in the arterial muscles even after section of the vaso-constrictors; they are simply inhibitory nerves for the arteries, as the fibres of the vagi are inhibitors for the heart. The nervus depressor which was discovered by Ludwig and Cyon (54) presents an instance of a nerve trunk transmitting only inhibitory impulses for the vascular system in a centripetal direction. The vaso-constrictors are in a state of tonus, which is kept up by a centre in the medulla oblongata—the vasomotor centre.

When the central end of the depressor is stimulated, the blood pressure sinks considerably, which is generally interpreted by the assumption that the depressor is an inhibitory nerve for the vasomotor centre. The assumption of Bayliss (55) that the depressor carries impulses to a vaso-dilator centre in the medulla is, as Reid Hunt (56) justly remarks, unsupported by any evidence.

In connection with the vascular system I shall also speak of the spleen. This organ contracts when the splanchnic nerves are stimulated, and Roy (57) has found that it shows constant rhythmic contractions even when it is deprived of all nerves. Now, Schaeffer and Moore (58) have recently discovered that the splanchnic nerves contain also nerve fibres, the stimulation of which inhibits the rhythmic contractions and causes an expansion of the spleen; in short, they have discovered inhibitory nerve fibres for the spleen.

Camus and Gley (59) have recently discovered the presence in the splanchnic nerves of fibres dilating the receptaculum chyli and thoracic duct, which nerves are to be compared with the vaso-dilators of the blood-vessels. In this connection it is interesting to mention that the lymph hearts, which present the moving power for the lymph in amphibia and reptilia, also show inhibitory phenomena. Goltz (60) has found that mechanical stimulation of the abdominal viscera or blood heart causes a diastolic standstill of all the four lymph hearts in the frog. This reflex is unsuccessful if the medulla oblongata is destroyed. According to Volkmann (61), the centre for the movement of the lymph hearts is located within the spinal cord. Then the nerve fibres stretching between this centre and the medulla will be the carriers of the inhibitory impulse to the centre, which would be, as Goltz says, an instance of intracentral inhibition. Eckhard (62), however, and others state that the second and tenth spinal nerves correspond to the vagus, inasmuch as the stimulation of the peripheral ends causes the diastolic standstill of the lymph hearts. However this may be, it is an assured fact that the rhythmic beat of the lymph hearts can be inhibited by active stimulations just as the rhythmic beats of the blood hearts can be actively inhibited.

Inhibition in the Respiratory Apparatus.—We have just seen that inhibition was discovered and established for the heart, blood-vessels, spleen, lymphatics, and the lymph hearts. We will now proceed to examine the respiratory mechanism. Rosenthal (63) has discovered that stimulation of the central end of the laryngeal superior nerve causes inhibition of the inspiratory muscles. The same was found by Hering and Kratschmer (64) for the second branch of the fifth nerve, and by Graham (65) for the peripheral end of the splanchnic nerve. Hering and Breuer (66) established the fact that distention of the lungs caused an inspiratory standstill with relaxed muscles. And of the prolonged controversy about the nature of the effect of the stimulation of the central end of the vagus, it can be stated

that at present nearly all the authors agree that also expiratory standstills can be obtained, and I (67) have shown, by means of a division of the spinal cord, thus paralyzing the expiratory muscles, that these standstills mean genuine inhibition, relaxation of the inspiratory muscles. The same was done by Gad (68) and Wegele (69) for the expiratory standstill brought about by stimulation of the trigeminus. At present all opinions seem to agree that reflex inhibition is a normal factor in the respiratory mechanism. It should be further mentioned that, according to the recent experiments of Doyon (70), the vagus contains inhibitory nerve fibres for the muscles of the bronchi, which can best be seen after poisoning the animal with pilocarpine.

Inhibition of Secretion.—On account of the close relations existing between secretion and circulation it is extremely difficult to establish the presence of inhibitory nerves for the secretion independent of vaso-dilators, which accounts for the meagreness of well-assured facts concerning the working of inhibition in the different secretory functions. It is, however, an encouraging fact that very recently separate nerve fibres coming from the vagi have been discovered for the secretion and inhibition of the pancreatic juice, thanks to the genial methods and persevering labors of Pawlow (71) and his pupils (72), remembering at the same time that until recently there was no positive proof of the dependence of the pancreatic secretion upon nervous influence. Morat (73) attributes inhibitory effects upon the pancreas also to the splanchnicus. Pawlow (71), Ushakow (74), and Contejean (75) speak also of the presence in the vagi of inhibitory nerve fibres for the secretion of the gastric juice. Vulpian and others (76) assume the presence of inhibitory nerve fibres in the cervical sympathetic of the horse for the sweat gland, on account of the profuse sweating which follows the section of the sympathetic. Arloing (77) described lately observations which seem to demonstrate the presence of inhibitory fibres in the sympathetic nerve of the donkey and the cow for the lacrimal as well as for the sweat glands of certain facial regions. There are statements alleging the existence of nerves for inhibition of the secretion of milk, and even for the secretion of the sebaceous glands. While all these assertions might really be true, it can not be maintained that they are proved facts, the more so as in some cases the possibility was not even taken into consideration that the observed antagonism between these called secretion and inhibition might have had reference only to the ducts of the glands—i. e., inhibition or acceleration of removal from the ducts. In this connection the innervation of the bile duct, as it was described recently by Doyon (78), is very interesting. According to this investigator, stimulation of the peripheral end of the splanchnicus causes a contraction of the bile duct and the gall bladder and a relaxation of Oddi's sphincter muscle in the duodenal papilla; while stimulation of the central end of the splanchnic nerve

causes the reverse—the contraction of the sphincter and relaxation of the bile duct and the gall bladder. Stimulation of the central end of the vagus has the same effect as the stimulation of the peripheral end of the splanchnicus. This means apparently that in the centrifugal direction the vagus contains inhibitory fibres for the gall bladder and the bile duct, and motor fibres for the sphincter, while the splanchnic nerve carries motor fibres for the gall bladder and the bile duct, and inhibitory fibres for the sphincter. In the centripetal direction the case is reversed: the vagus transmits afferent impulses which cause the contraction of the gall bladder and the bile duct and inhibition of the sphincter, while the splanchnicus would cause reflexly the inhibition of the gall bladder and bile duct and contraction of the sphincter. This is a striking example of a double-crossed innervation, which would beautifully explain the mechanism of the storage of the bile in the bladder or its discharge into the duodenum.

Inhibition of the Genito-urinary Organs.—The nerves which assist in the production of bile and the excretion of urine, outside of the vascular influence, are yet to be found. For the bladder, von Zeissl (79) reports having found a mechanism of crossed innervation modeled after the pattern described by Ehrmann and Fellner for the intestines and the rectum—viz., that the nervi erigentes control the contraction of the detrusor and the relaxation of the sphincter muscles, while the hypogastric nerves control the contraction of the sphincter and the relaxation of the detrusor. Langley and Anderson (80) state that the inhibition fibres for the bladder "are few, if any"; neither have von Courtade and Guyon (81) been able to confirm the statement of von Zeissl, so far as the inhibition is concerned. It should be remembered, however, that the function of the bladder is properly executed even without the usual influence of the central nervous system, as it was observed by Goltz (82) in a dog in whom the lower part of the spinal cord was destroyed.

According to Fellner (83), the nervi erigentes contain motor nerves for the longitudinal and inhibitory nerves for the circular muscle fibres of the uterus and the vagina, while the hypogastric nerves contain the motor nerves for the circular and the inhibitory nerves for the longitudinal muscle fibres. Langley and Anderson (84), in their study of the relations of the lumbar and sacral nerves to the uterus and the vagina, did not observe any inhibitory effects upon these organs. The latter writers (85) describe inhibitions obtainable from the sacral nerves for the vulva, the muscle of the skin in the genito-anal region, for the unstriated muscle of the penis, and for the retractor muscle of the penis of the dog. Of this latter muscle the authors say that it, too, "offers advantages for the study of inhibition of unstriated muscular tissue represented by no other muscle in which inhibition is known to occur."

In our search through the vegetative system we have

been able to establish the presence of inhibitory phenomena at nearly all points where motor phenomena are present, and in some of the secretory functions proper investigations have already made quite a successful start.

(To be continued.)

INTRA-UTERINE VAPORIZATION.*

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INTRODUCTORY.—The treatment of hæmorrhage by heat is of ancient origin. We are informed that until the middle of the sixteenth century, when Ambroise Paré revived the use of the ligature, hæmorrhages of all kinds were treated by means of the actual cautery, red-hot knives, boiling pitch, and molten lead. Two centuries later the cautery was still freely used in all kinds of surgery. At the present day the actual cautery is extensively used in hæmorrhoid operations, or in the preliminary stage of a vaginal hysterectomy; indeed, it is possible to do this latter operation completely with the cautery as the sole hæmostatic.

Hot water also has long been known to be of service in the various forms of parenchymatous oozing. At a temperature ranging between 110° and 120° F. it is applied to bleeding surfaces. Surgeons find it useful to apply pads soaked in hot solutions to the extensive oozing surface which is apt to be present during the amputation of a breast, and in post-partum hæmorrhage it has long been the practice of obstetricians to rely upon hot water to cause contraction of the relaxed uterine muscle and blood-vessels.

Heat, as generated by electricity, forms an important element in the electrolytic treatment devised by Skene, which has shown such marvelous hæmostatic power in his own work and in that of Dr. Clement Cleveland.

The use of steam at a temperature of the boiling point or above, for hæmostatic purposes, is of recent origin. Some four or five years ago Professor W. F. Sneguireff, of Moscow, suggested its employment in cases of uterine hæmorrhage. At the present moment the method is being extensively tried in Russia and Germany. So far, with a few exceptions, favorable experiences have been published. Among the most enthusiastic exponents of the new method of treatment is Ludwig Pincus, of Dantzig.

The Apparatus.—Without attempting a description of the earliest models, which were all more or less defective, I shall at once proceed to describe the instrument of Pincus, which is as nearly perfect as one could fairly expect: The steam generator consists of a brass

kettle provided with a safety valve, a central opening for the insertion of a thermometer, and a short elbowed spout, to which is attached the rubber tubing for the passage of the steam. The metal catheter is attached to this tubing, which is of particularly good quality and of any desired length. The kettle rests in a portable holder with a space beneath for an alcohol lamp. The kettles are tested before delivery, and are guaranteed to withstand the pressure of steam heated to a temperature of 125° C. (257° F.) By means of one of the alcohol lamps accompanying the apparatus the steam can readily be raised to a temperature ranging from 100° C. to 110° C. (212° F. to 230° F.) and kept up without danger for any desired period of time.

The nickel-plated uterine catheters are of two shapes, one being a simple hollow sound and the other being a similar sound, but fenestrated at its distal end. The latter, the vaporizer, permits the superheated steam to come in direct contact with the uterine interior; the former, called by Pincus the uterine vapo-cautery, permits the application of dry heat to the same surface. Altogether, the instrument resembles in shape and principle the Fritsch uterine irrigator, but has in addition a metal tube attached for the escape of condensing steam.

Technics.—The patient is placed in the lithotomy position on a table, with a Kelly pad beneath her, and the external genitals are cleansed and the vagina douched in the ordinary manner. Through a short wooden speculum the cervix is exposed and seized in a tenaculum forceps. The uterus is next carefully sounded, and, if the cervix is contracted, it is somewhat dilated by means of slow gradual circular dilatation. With the aid of my four-bladed dilator I have thus far never had any difficulty in accomplishing this result. The uterine catheter, properly protected, is next introduced to a point within a short distance of the fundus uteri and the steam turned on. After a period of time varying between five and thirty seconds, as the necessities of the case seem to indicate, the steam is shut off. On withdrawing the instrument a strip of iodoformized gauze is introduced past the internal os, sometimes to the fundus. During the application of the steam a nurse or assistant may permit a stream of cold water to play against the cervix. In many of my cases I have entirely dispensed with this precaution, as I think the wooden cylindrical speculum sufficiently protects the vagina and vulva from becoming scorched.

The operator and instruments must be surgically clean. The metal instruments are prepared in the usual manner by being boiled in soda solution; the wooden speculum, after being scrubbed with soap and water, is kept in a strong solution of bichloride of mercury until ready for use, when it may be lubricated with sterilized vaseline and introduced into the vagina. In order to prevent scorching of the cervical canal and burning of the operator's hands, it is well to encircle the instrument in gauze up to a point about an inch and a half

* Read before the Society of Alumni of Bellevue Hospital, December 7, 1898. For the discussion, see page 567.

from the top. Sometimes a piece of rubber tubing, slipped over the catheter like a collar, will partly accomplish the same result. Pincus has recently devised a wooden cover for the same purpose.

After-treatment.—It is well for these patients to keep in bed for several days after intra-uterine vaporization. As a matter of fact all of my patients, in whom no additional operative interference was called for, were treated in my clinic at the Post-graduate School or in my office. Many of the women walked a considerable distance after the vaporization, and few of them remained in bed longer than a day or two. In spite of all this I have seen only one case of parametritis, and that in a hospital patient who was put directly to bed. As the preceding curettage was done for an incomplete abortion with large hæmorrhages, it is possible that the pelvic inflammation was the result of other factors. Still, I think it a good rule to order every patient to bed for a number of days with an ice-bag applied to the hypogastrium.*

Sequelæ.—A free leucorrhæal discharge, in some cases blood-tinged or with an odor, will be noted in nearly all of the cases after intra-uterine vaporization. This is undoubtedly due to the destruction of the uterine mucosa with its ultimate discharge. After a number of days the flow diminishes and finally ceases. In case of persistent bleeding a second vaporization, with higher temperature and longer duration, may be called for. Perimetritic irritation or inflammation may follow the procedure. After several days' rest in bed with cold applications locally, these complications usually pass off.

Stricture of the cervix has been observed in a number of cases, and it has been repeatedly cited as one of the chief objections to the method. To prevent this serious complication, it may be desirable to exclude all cases in which there already exists a strictured os. I have repeatedly resorted to dilatation of the cervix, protected the catheter with gauze up to a certain point, usually past the internal os, and packed the uterine cavity with gauze at the completion of the operation in order to avoid this sequel. After forty-eight hours the gauze is removed and, if deemed necessary, fresh gauze is reintroduced. Still, it is only proper to record that, in one of my patients, three months after extensive trachelorrhaphy, curettage, and vaporization (for persistent uterine hæmorrhages, which a previous curettage had failed to

control), I found the external os completely obliterated, and had to push my finger through a thin membranous diaphragm in order to permit the escape of the retained menstrual blood.

Complete obliteration of the uterine cavity may be effected by a protracted application of the superheated steam. Steam heated to 110° C. (230° F.) and applied for two minutes will usually produce this result. Pincus intentionally obliterated the uterine canal in one case. I have used the method with the same object in another, but the time is too short to determine whether or not I have succeeded. It will clearly be appreciated that if the method is feasible it will be applicable in many cases of bilaterally diseased appendages, in which many prominent gynecologists regularly remove the uterus; for, if this organ can be sterilized, cured of its catarrhal condition, and its canal completely obliterated if desired, there is no longer a supporting argument for its removal.

On the other hand, Baruch and von Weiss have each reported a case in which the artificial menopause was unintentionally induced after uterine vaporization. In one of these cases, after an application of steam, heated to 100° C. (212° F.), for forty-five seconds, complete obliteration of the uterine cavity was caused in a young woman of nineteen. The fact that we know that the same result may follow curettage or the intra-uterine application of a caustic is no apology for overlooking this really dangerous sequel of vaporization. I think there was an error in these cases in applying the steam at too high a temperature for a too prolonged period of time. In order to obviate such a disagreeable result, I have made it a rule in ordinary cases, first, not to heat the steam above 106° C. (223° F.); secondly, to limit the application to a space of time varying between five and twenty seconds; and, thirdly, to pass a strip of gauze beyond the internal os in every case at the termination of the procedure. With these precautions I think the chances of an obliteration of the uterine canal will be perhaps entirely excluded.

Indications.—Pincus has resorted to vaporization (or cauterization—he maintains there is no difference!) in the following class of cases: Simple endometritis associated with profuse hæmorrhages or leucorrhæa; irregular hæmorrhages due to subinvolved uteri, myomatous uteri, and hyperplastic or catarrhal endometritis; leucorrhæal conditions due to catarrh or gonorrhœa of the cervix or endometrium; and infected conditions of the post partum uterus. In seventy-eight cases successful results were obtained in sixty-four. One case of puerperal sepsis with general infection died. Pincus believes that the eighty-two per cent. of good results could be improved on if the individual failures were subjected to a second or third repetition of the treatment.

Contraindications.—Intelligent treatment by any method, new or old, presupposes correctness of diag-

* Since this was written, I have ceased vaporizing ambulant patients. A case of syncope and one of extensive parametritis after office vaporization have convinced me that Dohresen is right when (in a very recent article) he advises the employment of this method with proper assistance and under appropriate surroundings—namely, at the patient's home or in a hospital. It is well to add also that one case (Treble's) has terminated fatally from perforative septo-peritonitis. This is the only fatal case, so far as I know, and I believe, with Dohresen and Pincus, that such an unfortunate result can be avoided by the introduction of the vaporizer for a short distance beyond the internal os and by strictly limiting the application to between five and twenty seconds for the first time.

nosis. Improperly used, the best operative procedure may not only fail to do good, but may be distinctly productive of harm. Thus, an early case of carcinoma uteri must not be tampered with by any method of treatment short of radical. When such a case has become inoperable, dry heat or vaporization may be employed as a palliative measure. Hemorrhages or sepsis following abortion or labor demand removal, with the curette, of the placental tissue before vaporization can be resorted to. The two principal contraindications in ordinary cases of uterine hemorrhage are diseased annexa and stricture of the cervical canal. Still, as pointed out elsewhere, the latter object can, in great measure, be overcome by previous dilatation of the cervix, protection of its canal from the heated catheter by the various devices mentioned, and, at the termination of each vaporization, by cervical gauze packing. Diseased states of the annexa must always be excluded before the application of this treatment. Finally, in submucous or polypoid myomata vaporization is contraindicated because of the danger of inducing suppuration.

Personal Experiences.—In testing this treatment during the past six months, I have tried to be very careful in the selection of the cases. Drawing my material exclusively from personal sources, I am not able to give you histories of more than twenty-one cases. These I will describe very briefly.

CASE I.—Frequent and profuse uterine bleedings due to catarrhal endometritis: application of vapor heated to 102° C. (215° F.) for five seconds. The patient complained of no pain and walked home. No subsequent report.

CASE II.—Gonorrhoeal endometritis; profuse discharge, showing large numbers of gonococci present; five-second application of vapor heated to 102° C. (215° F.). A week later, gonococci present, but very much diminished in number. The patient failed to report for subsequent treatment or observation.

CASE III.—Under anaesthesia, four large submucous fibroids were removed after splitting the cervix and drawing down the growths. Curettage of the uterine interior followed by vaporization at 105° C. (221° F.) for ten seconds. Five months later, complete cure.

CASE IV.—Under anaesthesia the uterus was curetted and vaporized for ten seconds at 100° C. (212° F.) for hemorrhagic endometritis. Patient left the hospital at the end of a week perfectly well. No subsequent report.

CASE V.—Fungoid endometritis with lacerated cervix. Under anaesthesia, curettage, trachelorrhaphy, and vaporization at 100° C. (212° F.) the patient left the hospital cured. Three weeks later she reported herself as perfectly well.

CASE VI.—Endometritis causing metrorrhagia; rectocele. Under anaesthesia, curettage, vaporization at 100° C. (212° F.) for ten seconds; posterior colporrhaphy. Four months later the patient reported herself perfectly well.

CASE VII.—Hemorrhagic endometritis with lacerated cervix. Curettage, vaporization at 100° C. (212° F.) for ten seconds; trachelorrhaphy. Four weeks later the patient seemed to be perfectly well.

CASE VIII.—Submucous fibroid causing profuse hemorrhages. Excision of tumor after splitting the cervix under anaesthesia. Curettage and vaporization at 105° C. (221° F.) for ten seconds. Repair of cervix. Four months later the patient reported herself completely cured.

CASE IX.—Profuse flow of blood in connection with incomplete abortion. Under anaesthesia, curettage and vaporization at 105° C. (221° F.) for ten seconds. Parametritis occurred, which delayed the patient's recovery for eighteen days. No subsequent report.

CASE X.—Metrorrhagia due to endometritis; lacerated cervix and perinaeum. Under anaesthesia, curettage and vaporization at 102° C. (215° F.) for ten seconds; amputation of cervix and perineorrhaphy. The patient left the hospital cured.

CASE XI.—Irregular uterine bleedings due to endometritis and retroflexion. Under anaesthesia, curettage and vapo-cauterization at 102° C. (215° F.) for ten seconds; shortening of the round ligaments after Alexander's method. Good result five weeks later.

CASE XII.—After miscarriage, six months previous to consulting me, the patient had been curetted at a hospital for profuse hemorrhage. For three months each monthly period has been a violent gush of blood lasting from seven to eleven days. Nothing but an enlarged flabby uterus to be found. Vaporized at 102° C. (215° F.) for ten seconds, without anaesthesia at the Post-Graduate School before the class. No pain complained of. The patient walked home, a distance of over a mile. Saw her four weeks later, after the next menstrual period, which came on time, lasted five days, and was moderate in amount. She said she had never felt better in her life. [Five months later she was in perfect health.]

CASE XIII.—Metrorrhagia due to endometritis with pyosalpinx (gonorrhoeal). Under anaesthesia, curettage and vaporization at 100° C. (212° F.) for fifteen seconds. Posterior colpotomy with removal of the diseased annexa. Three weeks later the patient was discharged from the hospital cured.

CASE XIV.—Profuse menstrual discharge recurring at intervals of two or three weeks. Owing to haemoptysis (due to tuberculosis?) the patient has feared operative interference. In my office she was vaporized at 100° C. (212° F.) for ten seconds. Her next menstrual flow was anticipated, and again profuse, so that repetition of the treatment was suggested. [See Case XXI.]

CASE XV.—Woman, aged thirty-eight years, probably at climacteric. After four months' absence of menses it occurred, and again returned in two weeks, and persisted for eleven days. In my office she was vaporized at 100° C. (212° F.) for fifteen seconds. Kept in bed for three days. Several days later she was feeling comfortably.

CASE XVI.—Irregular uterine hemorrhages. Last time, after two weeks' absence, blood appeared and flowed continuously for thirteen days. Owing to rigidity of the internal os considerable time was spent in my office in slowly dilating it. Vaporization at 105° C. (221° F.) for ten seconds. Two weeks later she was comfortable.

CASE XVII.—During a period of six months, following a miscarriage, this woman has not been free from a menstrual discharge for more than ten days at a time. She has become very anemic from the almost constant loss of blood. Diagnosis: Hemorrhagic endo-

metritis. Vaporization at 106° C. (223° F.) for twenty seconds in my office. Nine days later she was complaining of profuse leucorrhœal discharge and vague pelvic pains. Otherwise nothing abnormal was found.

CASE XVIII.—Patient, thirty-three years old; acquired gonorrhea from her husband twelve years ago. Leucorrhœal discharge ever since. Three years ago I performed an abdominal section on this woman and removed two large pus tubes. With the exception of the profuse leucorrhœal discharge, due to the chronic endometritis, she has enjoyed good health ever since. Since the operation she has ceased to menstruate. In my office I applied vapor heated to 105° C. (221° F.) for sixty seconds with the object of obliterating the uterine cavity. She went to her home in Hoboken, and for a good portion of the succeeding week remained in bed. A week later she reported herself as feeling well, except for a profuse leucorrhœal discharge which had some odor. This disappeared almost completely during the subsequent week.

CASE XIX.—Girl, aged nineteen years. For three years has suffered from profuse leucorrhœa. For two months the periods have recurred at intervals of two weeks and have been accompanied with considerable pain. Diagnosis: Endometritis dysmenorrhœica. An examination under narcosis excluded annexal disease. Vaporization at 110° C. (230° F.) for nearly ten seconds. A week later she was about, and felt well.

CASE XX.—Multipara, aged thirty-eight years; last pregnancy ten years ago. After six weeks' absence menstruation reappeared and persisted profusely for fourteen days. Diagnosis: Uterine hemorrhage due to climacteric. Vaporized at 100° C. (212° F.) for sixty seconds, inviting an obliteration of the uterine canal. Performed before the class at the Post-graduate School. In this case bleeding was completely checked, according to the subsequent report.

CASE XXI.—Same patient as in Case XIV. Repetition of vaporization because the menstrual flow was anticipated by a week, and lasted profusely for fourteen days. Applied the vapor at 100° C. (212° F.) for forty seconds. As the woman was only thirty-four years old, gauze was introduced into the uterine canal to prevent its obliteration. A few days later she reported herself at the office (where, without anesthesia, the little operation had been done) as being fairly comfortable. [Several months later she reported herself as perfectly well.]

Conclusions.—I appreciate, of course, in presenting the foregoing *résumé* of my experience with intra-uterine vaporization, that my work is still very incomplete. I do not attempt to make sweeping deductions until the subsequent results, after a sufficient lapse of time, shall have proved the true value of the method. I think, however, that I am able to do some service by pointing out in this paper the feasibility of the treatment and the character of the cases in which it is applicable.

Permit me, in conclusion, to summarize the present uses of vaporization or vapo-cauterization.

1. As a *hemostatic* it has been employed most successfully in cases of non-malignant post-climacteric uterine hemorrhages. It has proved curative in the various irregular bleedings met with in connection with catarrhal fungoid, or hemorrhagic endometritis. It acts as a palliative measure in certain cases of fibroid

tumor or inoperable carcinoma associated with hemorrhages.

2. As a *caustic* it can be relied on to destroy the mucous lining of the uterus, even to the extent of obliterating the uterine canal.

3. As a *bactericide* it may be used in cases of gonorrhœal and septic puerperal endometritis. Fenomenow has repeatedly had the uterus (which was subjected to vaporization and later removed by hysterectomy) examined bacteriologically and proved it to be sterile.

4. To *reduce the bulk of the subinvolved uterus*, Pincus has frequently resorted to intra-uterine vaporization with success.

5. In *Chronic Suppurating Fistulous Tracts*.—Fenomenow has reported successful results in cases of abdominal fistule of several years' duration, which had resisted all other methods of treatment.

112 EAST SIXTY-FIRST STREET.

"INERTIA" AND PEDICLE-TWISTING.

BY CHARLES P. BECKER, M. D.,
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ON opening the abdomen for the removal of ovarian and other pedunculated tumors, it is not unusual to find them twisted on their pedicles. Many surmises as to the cause of this have been made, but the aetiology is generally conceded to be a mystery. Probably the torsion may be produced in several ways, but the writer, after reading an essay of Dr. Paul F. Mundé's on this subject in the *Journal* of February 25th last, and finding no satisfactory hypothesis advanced, thought that he could offer one that would explain some cases.

In stating an elementary principle in physics and giving some simple illustrations the writer does not presuppose any ignorance of the subject on the part of the reader, but merely desires to lay a foundation on which to base his theory.

All bodies when at rest have a tendency to remain so, and, when in motion, to keep on moving, unless acted on by a force strong enough to change their condition of rest or motion.* This property of matter is known in physics as "inertia." We have all had personal experience of it many times. When obliged to stand in a crowded car, we have nearly (or quite) fallen backward when it suddenly began to move forward, because our bodies wanted (physically) to maintain their previous relative position in space, and the new force, being transmitted to our feet through the floor of the car, tended to pull them from under us. Again, when

* As absolute rest is unknown in Nature, and all bodies are in motion of some sort—I mean molar motion, not molecular (e.g., a stone lying apparently motionless on the surface of the earth near the equator is traveling in a spiral direction at a speed of over a thousand miles an hour, besides having several other motions in space); it would be equally correct to say that all bodies resist a change in the direction or rate of their motion.

the motion of the vehicle was rather too suddenly retarded, we had to pull ourselves back by the straps to keep from falling or running forward. The same law applies to circular as to linear motion. Were we standing, looking north, at the exact centre of a car placed on a turntable, and this were then suddenly and rapidly revolved to the right, our bodies would tend to keep on facing the north, and would certainly do so if there were no friction between our feet and the floor of the car; similarly, after revolving with the turntable, were its motion suddenly stopped, we should, in the absence of friction, keep on spinning to the right for some time.

Nearly every one has noticed that when a tumbler or other circular vessel containing a liquid is turned round, the latter does not at once revolve with the glass. This is especially noticeable when visible particles are in suspension or floating on the surface.

Take a common tin or enameled wash basin—preferably one that is slightly convex on the bottom, so that it may be spun like a top. Fill it about two thirds full of water and place a large cork on the surface near the centre. When the water has become quiet, note the direction in which the cork points and then spin the basin around. It will make nearly a dozen revolutions before the cork begins to turn in the same direction.

Now vary the experiment in this wise: Stretch two wires or cords across the top of the basin at right angles to each other. Take two strands of floss silk or soft thread; place them together and tie one end to the cork and the other to the wires where they cross at the centre of the basin, leaving a length of four or five inches of the doubled thread between the cork and wires. Let the cork float on the water under the wires and then revolve the basin as before. The cork will remain stationary, but the strands attached to it will become twisted together. The use of two threads is simply to make the torsion more perceptible than if one were employed.

Now, what takes place in the basin may also happen in the human body under analogous conditions. The basin may represent the human basin or pelvis; the cork, a tumor; the thread, a pedicle, and the crossed wires the ovarian or visceral attachment of the pedicle. The relative proportions are of little consequence—it is only the principle that is intended to be illustrated. In the experiment, however, the water and the cork must be considered as one body, for the former, being the heaviest, is really the substance that illustrates the effect of inertia, and the cork makes this visible and serves as a convenient means of attaching the "pedicle."

In the human body all the organs are so anchored that they must follow the movements of the trunk. The intestines, through their peritoneal covering, are so well lubricated that they can move with the greatest ease and with less friction than in the best-oiled machinery, and torsion and strangulation would take place

inevitably on turning the body around if it were not for the mesenteric attachment (which, of course, has other important functions). Ovarian tumors can move with the same absence of friction, and, if they are attached by only a single small pedicle, the latter is liable to become twisted every time the patient turns round. It is only a question of favorable conditions or the reverse. Tumors that are firmly grasped by surrounding viscera will turn with them. Those that lie extremely to one side or the other will be carried round by the revolution of the body just as a ball held in the hand would, unless the person happened to turn round on one leg in such a way that the axis of motion fell within the tumor.

A woman engaged in housework turns round a great many times in the course of a day, as, for instance, in going from a kitchen table to the stove and back again. If she has a tumor such as we are considering, she may turn round hundreds or thousands of times without torsion taking place, simply because synchronous favorable conditions do not occur. Once in a while, however, her abdomen will be in just the right state of relaxation and the axis of revolution of her body will fall in just the proper place in the tumor for inertia to exert its power: her body turns but the tumor does not, and a partial or complete torsion takes place. If favorable conditions recur, many twists and complete strangulation may in time be produced. As most people have a preference for turning round always in the same direction, either to the right or left, the chances of untwisting do not equal those of twisting, though the former must occasionally occur.

Turning round horizontally, as in bed, may cause pedicle-twisting the same as perpendicular motion.

The same principle of inertia acting on the fœtus may explain the occasional twisting of the funis in utero.

218 HALE AVENUE.

COMPLETE LACERATION OF THE URETHRA.

WITH THE REPORT OF A CASE.

BY ARTHUR STERN, M. D.,

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THERE are, according to Terrillon, three kinds of urethral laceration:

First. Interstitial laceration, which is very rare—six per cent. of all cases. In these a hæmatoma is formed in the corpus cavernosum, which becomes absorbed, or organized into scar tissue, or causes a necrosis of the urethra.

Second. The cavernous tissue and the urethra are torn to a greater or less degree.

Third. Complete laceration of the urethra, the ends of the urethra being completely separated. If urethrotomy is performed in these cases, the finger will enter a cavity filled with blood and urine.

The latter class, complete laceration of the urethra,

is comparatively rare. Kaufmann says that it is most frequently found in American and English hospitals, being quite unknown to some hospitals of Europe. He gives no reason for this singularity, but it is probably due to the increased vicissitudes of human activity growing out of the increasing use of complicated and delicate machinery with the attendant risk of accident. Frequent causes of urethral lacerations in general are falls on the perineum, kicks by horses, and bicycle and railroad accidents, the latter class involving for the most part fracture of the pelvis.

The seat of the complete laceration is commonly the bulbous part of the urethra. If the pelvis is fractured, the membranous portion is the affected part.

The symptoms of complete rupture of the urethra are few, but, taken together with the history of the case, are enough to make the diagnosis absolutely sure. They are, anuria, passing of blood instead of urine, and in most cases perineal swelling. If a catheter is introduced it will not enter the bladder, unless, indeed, it is introduced immediately after the accident. The patient always suffers more or less from shock.

The result of an injury of this latter kind depends largely on the treatment of it. If the true difficulty is not recognized, urinary infiltration, with the attendant sufferings of pyæmia, may follow; or, if fortune favors, perineal cellulitis with urinary fistula. If, however, the case is properly diagnosed, and surgical interference follows the accident, the result is nearly always favorable. In every case the treatment of complete rupture of the urethra should be by immediate external urethrotomy, even though it should be possible to introduce the catheter after the operation.

I submit a case.

George S., thirty-four years old, a native of Germany, consulted me on March 15, 1898, with reference to an urethral injury. His statement was that half an hour previously, while hanging clothes on a line, he fell from a ladder, on which he had been standing, and struck upon a fence near by, one of the pickets striking him midway between the testicles and the rectum. That shortly after he had tried to urinate, but had discharged instead quite a quantity of blood. He had walked a distance of about one mile to my office, was perspiring freely, and his face was pale and wore an anxious look. I at once sent him to the Alexian Brothers' Hospital, following him immediately. Upon my arrival I introduced a soft sterilized Nélaton catheter, and after a few fruitless trials had him prepared for external urethrotomy. After separating the superficial fascia, the finger entered a cavity which discharged about two ounces of bloody detritus, and in this cavity could be felt the guide which had been introduced. After considerable difficulty, the central portion of the urethra was discovered. A catheter *à demeure* was now introduced and left *in situ*. The ends of the urethra were not stitched over the catheter, as there was too great a laceration of the tissues. The external part of the catheter was stitched to the prepuce. The perineal wound was packed. Recovery was uneventful, with the exception of a balanitis, which the patient

developed during the latter part of the first week. Urotropin was administered twice a day. The perineal wound having closed completely—the urethra admitting 24 French size easily—the patient was discharged April 5, 1898.

Although external urethrotomy is one of the oldest, I might say, classical operations (seeing that Celsus, Hippocrates, the Arabian surgeon, Abul Kasim—end of the eleventh century in Cordova—and many French surgeons of the middle ages, including the great Pierre Franco, 1500-'62, used it frequently), it is only since the time of John Hunter, 1728-'93, that it has come into general use. Perhaps one of the reasons for this fact was the general aversion to producing scar tissue in the narrow channel of the urethra. W. Roser, 1817-'88, however, removed these fears by showing that as soon as the perineal cut begins to heal the scar produces a traction in the direction of the perineum, dilating the urethra at this point.

Lenander, in volume liv of the *Archiv für klinische Chirurgie*, published recently four cases of complete rupture of the urethra, elaborating in detail the anatomy, diagnosis, and prognosis of this injury. He recommends immediate operation, and, if possible, the stitching of the urethra over the catheter. He says, however, that it is sometimes impossible to stitch the urethra, as the tissues may be too brittle, or the distance between the two ends too great. He further says that the operation should be performed as soon as an attempt at catheterism fails.

Let me say once more that two things are needed for the treatment of complete laceration of the urethra—viz., early recognition and early operation.

Literature.

1. Güterbock. *Die chirurgischen Krankheiten der Harn- und männlichen Geschlechtsorgane*, vol. i, part i, p. 75.

2. V. G. Lenander. Ueber die Behandlung der Ruptur der hinteren Harnröhre mit 4 Fällen von Ruptur der Pars membranacea, darunter eine Fahrradverletzung (Aus der chirurgischen Klinik in Upsala). *Archiv für klinische Chirurgie*, Bd. liv, Heft 3, Berlin, 1897.

218 EAST JESSA STREET.

THE COATED TONGUE.

By W. H. WEAVER, M.D.

CHICAGO,
PROFESSOR OF OTOLARYNGOLOGY, AND LARYNGOLOGY IN THE
CHICAGO EYE, EAR, NOSE, AND THROAT CLINIC.

THE fur on the dorsum of the tongue consists of epithelial cells, detached papillæ, considerable granular matter, organic and inorganic, all of which is kept in a state of fermentation by *Schizosaccharomyces fungi*. Millions of these micro-organisms may be found in a small particle of the coating. These fungi consist of micro-

cocci, sarcinae, bacteria, spirilla, innocent or infectious, if an infectious disease exists in proximity. If one member of a family has tuberculous consumption, tubercle bacilli may be found in the coating of the tongues of the other members. The micro-organisms thus found growing on the tongue are constantly washed into the stomach at every meal; thence are carried into the blood, probably through the lacteals. In this manner the blood may be supplied with so many germs that infection sooner or later takes place.

From a clinical standpoint this coating plays still another rôle, and should be looked upon as a comparative index to the purity or impurity of the blood. To say that it indicates or depends upon the condition of the stomach, or is simply of such and such a character in certain diseases, means nothing but the statement of a coincidence.

When the urine stands for a time in an unclean vessel, the solids, including both organic and inorganic constituents, are precipitated. The larger the amount of waste matter drawn from the blood and the denser the urine, the greater will be the amount of the precipitate. The same changes occur in all the other fluids, excretions, and secretions of the body when their temperature and normal conditions vary.

The salivary secretion is composed of certain normal constituents. Besides these normal constituents, which vary within certain limits, there are undoubtedly some abnormal elements which are carried out through the glands from the blood when it is surcharged with impurities. Now, when this abnormal saliva is thrown into the mouth and subjected to the action of the numerous micro-organisms of fermentation, more or less of the solid matters are thrown down and constitute a salivary precipitate, which lodges on the teeth and on the dorsum of the tongue, also on the gums and lips, which, in cases of typhoid fever, is known as sordes. This salivary precipitate can be recognized on the teeth, as it roughens their surface. It is easily removed by the use of the toothbrush. It covers the teeth as a whitish deposit which microscopically shows the different forms of micrococci and bacilli. Upon the tongue it is allowed to remain until it becomes very offensive, unless it is systematically removed by scraping. It undergoes fermentation very readily, and is usually of the same character, consequently communicating an odor to the breath which is recognized as being the same whenever it occurs. In Bright's disease, in diabetes, and in almost any disease in which the nutrition and excretory organs are disordered, the coating becomes very foul, and the fouler the tongue the more serious the condition of the patient, the more sluggish his excretory organs, and the more heavily loaded his blood is with toxins. In some diseases the odor of the breath, as well as the color and character of the coating, is peculiar to the disease, depending upon the peculiar forms of toxins with which the blood is charged.

Besides the systemic germ infection, it is a question if the highly offensive odor, noticeable in any case in which the tongue is heavily coated, has not also a considerably depressant effect on the nervous system, if not on the nutrition, acting much like a gaseous poison, as all the inspired air is laden with it as well as the expired air.

It has been my custom, when consulted regarding a foul breath or coated tongue, to advise the patient to procure a tongue scraper and diligently clean the tongue every morning as a part of the morning toilet, using after it a disinfectant mouth wash on the tongue and as a dentifrice. This method will remove the foulest odors from the breath. The same deposit appears on the tongue every morning and must be removed as often.

Every surgeon who has a coated tongue and wishes to be aseptic should look to this possible source of infection, for in coughing, sneezing, or even speaking, it is known that the breath takes with it particles of moisture from the mouth and throat. And every patient who is to have an operation about the mouth or throat should have his tongue cleaned and disinfected. Every fever patient should have his tongue systematically cleaned to remove just that much self-infection. And every person who wishes to be agreeable in the society of others should remove the foul coating on the tongue and with it the offensive odor of the breath.

29 STATE STREET.

Therapeutical Notes.

A Syrup for the Pertussislike Cough of Influenza.—

M. J. Bernard (*Gazette des hôpitaux*, 1898, No. 37; *Klinisch-therapeutische Wochenschrift*, April 9, 1899) gives the following formula:

℞ Bromoform,	} each 1 part;
Tincture of aconite,	
Alcohol	20 parts;
Syrup of codeine*	100 "
Syrup of Tolu	150 "

M. S.: A dessertspoonful three times a day.

Dionin: a New Morphine Derivative.—According to *Merck's Archives* for March, Ludwig Hesse (*Pharm. Centralh.*, xl, p. 5) describes dionin as the hydrochloride of morphine monoethyl ether or ethylmorphine. It occurs as a white, somewhat bitter, microcrystalline powder. Dionin appears to be very serviceable therapeutically, because it affords neutral solutions which may be advantageously employed subcutaneously. It is soluble in about seven parts of water, in about 1.4 part of alcohol, and in about twenty parts of syrup; while it is insoluble in ether and in chloroform. It is precipitated from its solutions by most of the alkaloidal reagents.

Dionin has been employed by O. Schröder and by J. Korte (*Therapeutische Monatshefte*, xiii, p. 33) in a score or so of phthisical cases, and from the results ob-

* Made by dissolving 1 part of codeine in 25 parts of alcohol, and adding 475 parts of syrup.

tained the authors believe that the preparation is of unquestionable value therapeutically. It appeared to be an excellent and reliable means in the treatment of cough in the early stages of pulmonary phthisis; and it is recommended instead of codeine and morphine in all cases of this disease that are not far advanced, as well as in chronic bronchitis, pulmonary emphysema, and bronchial asthma. Not a single failure was observed. The dyspnoea and cough were always relieved, the asthmatic attacks cut short, and expectoration favorably influenced. Compared with morphine, dionin is more mildly narcotic in action, has scarcely ever any noticeable effect on the digestive tract, and has no noteworthy by-effects. Compared with codeine, on the other hand, it is found to be more powerful generally, and more persistent in action; it affords better and quieter sleep, and increases expectoration considerably. As a general analgesic, dionin is not as reliable as morphine, but it may, nevertheless, be employed in chronic painful affections, either internally or subcutaneously; and as no tolerance or habit is apparently established, it may shield many patients from acquiring the morphine habit. Its particular sphere of action will, however, doubtless be in the treatment of coughs due to irritation, those of bronchitis of every origin, and in phthisical subjects, where it affords general quiet and good sleep, stimulates expectoration, and appears to exert also a beneficial influence on the night sweats.

Dionin may be given in doses of a quarter of a grain several times daily, or in one dose of half a grain in the evening, in solution, syrup, or pill.

For the Anorexia of Pregnancy.—The *Riforma medica* for April 23d attributes the following to Leyden:

℞ Calumba root,	℥ of each, 225 grains;
Powdered ginger root,	
Senna leaves	60 "
Boiling water	℥125 "

Make an infusion. A wineglassful may be taken before meals.

An Antiseptic and Cicatrizing Collodion.—The *Riforma medica* for April 21st gives the following:

℞ Mastic in tears	45 grains;
Dry balsam of Peru	15 "
Narcotine	15 "
Chloroform	75 "

M.

This preparation is said to be useful on account of its antiseptic and cicatrizing qualities.

The Treatment of Keratosis of the External Auditory Meatus with Dilute Sulphuric Acid.—Dr. Gomez de la Mata (*Oto-rino-laringologia española*, March), after pointing out the difference between ceruminous plugs, which are easily amenable to ordinary treatment, and those of cornal epithelium, which are very refractory, relates the case of a patient in whom such a concretion completely blocked the external auditory canal in its middle portion, deafness being complete on that side. The author applied daily to the man for nine days a probe covered with kid (chamois leather (")) moistened with sulphuric acid diluted with one and a half times its own weight of water. On the tenth day a large portion broke down and became loosened, and in fourteen days the plug was perforated. The acid, however, caused some burning pain to the ear and set up a suppurative action, which loosened the ring of epithelium, so that it came away with alkaline syringing.

The membrana tympani was found normal, and hearing was restored. We imagine that considerable care must be exercised in the use of this doubtless efficient remedy, lest danger accrue to the membrane.

Tincture of Iodine in Acute Gastro-enteritis.—M. Bizine (*Indépendance médicale*, December 28th) recommends the following in cholera infantum and ordinary diarrhoea:

℞ Emulsion of castor oil	2,500 grains;
Essence of peppermint	3 drops;
Essence of cloves	5 "
Tincture of iodine	10 "
Chloroform	2 "

M. A teaspoonful to be taken hourly. The mixture should be kept on ice to prevent decomposition.

The foregoing quantity of the mixture usually suffices to effect a cure. Sometimes, however, a slight flux remains, in which case the author gives twice daily in a little water one of the following powders:

℞ Iodized starch	11½ grains.
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To be divided into six powders.

In the case of an adult, M. Bizine employs the mixture as follows:

℞ Emulsion of castor oil	2,500 grains;
Essence of peppermint	5 drops;
Essence of cloves	7 "
Tincture of iodine	15 "
Chloroform	5 "

M. A tablespoonful to be taken hourly.

The starch powders are thus prepared:

℞ Iodized starch	9 grains
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in each powder. One powder may be given every four hours.

Orthoform as a Remedy for Toothache.—Hildbrant (*Medical Press and Circular*, December 21, 1898; *Therapeutic Gazette*, April, 1899) states that orthoform produces immediate and complete relief from the severe pain due to inflammation of the pulp in a decayed tooth. A bit of cotton soaked in an alcoholic solution (strength not stated) is to be inserted in the cavity.

Gnëpin's Vesicating Fluid.—The *Progrès médical* for April 8th gives the following:

℞ Concentrated ammonia	1 part;
Camphorated oil	2 parts.

M. A pledget of cotton wool of the size of the intended blister is to be moistened with this oil and applied for fifteen minutes to the skin in the place desired. Vesication is rapid.

For Fissures of the Tongue.—The *Riforma medica* for April 10th gives the following formula:

℞ Carbolic acid	324 grains;
Tincture of iodine	25 "
Glycerin	225 "

M. For local application.

The Treatment of Infective Infantile Diarrhoea.—The *Journal des praticiens* for April 22d recommends the following:

℞ Eau sucrée	300 grains;
Wine of opium	from 4 to 2 drops;
Dilute hydrochloric acid	2 drops.

M.

To be given in one dose. It may be repeated several times a day, according to the indications [remembering that children are especially susceptible to opium].

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PRIVATE HOSPITALS AND THE PUBLIC FUNDS.

THE municipality of New York provides generously for its sick and injured poor. It is true that most of the large hospitals are private, in the sense that they are not owned, managed, or wholly maintained as city institutions. Some of them, however, manage to obtain a good deal of money from the city to aid them in their charitable work. This is understood by the community in a general way, but we think it is not commonly known that in some instances money given to a hospital to endow a bed goes toward defraying the general expenses of the institution, and then virtually a second endowment of that bed is demanded of the city, and often obtained.

The *Mail and Express* recently made some striking quotations from a report prepared by the commissioners of accounts of an examination of the books of the New York Post-graduate Medical School and Hospital. The commissioners say in their report: "It appears to be the practice in all hospitals of this city to consider the endowment of a bed as a donation to the hospital, instead of being for the benefit of some poor patient. Notwithstanding the endowment fund, the city is charged by the hospital for the treatment of the patient as a free patient, and, therefore, the hospital is paid twice." The commissioners go on to say that early in the year 1898 they made a similar statement in their report on the New York Society for the Relief of the Ruptured and Crippled, and they now suggest to the comptroller that an opinion be obtained from the corporation counsel as to the legality of such charges against the city.

According to the *Mail and Express's* article, the sum of forty cents is allowed by law to the Mount Sinai Hospital, and that of a dollar to the Polyclinic and Homoeopathic hospitals, for each day of free treatment of a patient in the wards. By multiplying these daily allowances respectively by the number of days of free treatment given by the New York Post-graduate Medical School and Hospital during the year 1898, and subtracting the products from the sum of \$25,000 allowed that institution out of the public funds, they find that the excess over the amount really required to provide the 11,236 days of free treatment reported

was \$20,505.60 on the forty-cents-a-day basis, and \$13,764.00 on the dollar-a-day basis.

As regards this particular institution, we understand that the facts are as follows: At two different times special appropriations have been made by the legislature for its benefit. One of them was of thirty-eight cents *per diem* for each infant treated in the babies' wards. The other was of a lump sum of \$25,000 per annum for the general use of the hospital, without specific mention of the amount of free treatment to be given. These enactments are not mandatory, but their execution is left to the discretion of the board of estimate and apportionment of the city. Sworn statements as to the number of babies treated are submitted to the comptroller by the hospital every three months, and on the strength of these statements the city allows the hospital \$10,000 annually. Now, with very few exceptions, every bed in the babies' wards is either endowed in perpetuity or supported by private annual contributions. This is how the hospital is "paid twice."

The additional allowance of \$25,000 is granted on the strength of testimony going to show the immense amount of charitable work done by the institution. But many of the beds outside of the babies' wards are endowed or maintained from year to year by individual contributions, and two years ago this consideration led one of the directors, Dr. Kelsey, who was also at that time a professor in the school, to dissent before the board of estimate and apportionment from the contention that the amount of charitable work done by the hospital was such as to entitle it to the appropriation. Shortly afterward he was ousted from his professorship for the reason, implied if not expressly stated, that he had shown a lack of loyalty to the institution in declining to join in its representations before the board. The commissioners of accounts seem now to have arrived at conclusions which justify Dr. Kelsey's course. Practically the hospital is "paid twice" for much of its work.

THE OPEN METHOD OF ADMINISTERING NITROUS OXIDE.

A VERY interesting contribution to our methods of inducing anesthesia, and one which, if it is proved to possess all the advantages alleged for it, is likely to prove of great service, was, according to the *Clinical Journal* for April 19th, made by Dr. Flux at a recent meeting of the Society of Anesthetists in London. Dr. Flux discards the closed mouthpiece and uses an inhaler closely fitting the patient's face, but wide open at the top, into which the gas is allowed to fall from any simple delivery apparatus. The gas naturally falls by

its own weight and has no tendency to escape upward, while the accurate adaptation of the inhaler to the face prevents its leakage downward. By this method of administration, which Dr. Flux had employed three hundred and fifty times, he affirms that the patient experiences absolutely no discomfort, since he is subjected neither to breathing into an air-excluding face-piece nor to the high pressure at which the gas issues from the cylinder into the inhaler. It is inhaled comfortably at the ordinary atmospheric pressure. Free access of air to the patient is obtained, and the gas is admitted into the inspired air in place of the air being admitted to the inspired gas, as is the case in the ordinary closed method. The gas only needs to be allowed to flow during inspiration, and, when once anaesthesia has been induced, it can be kept up indefinitely by allowing the patient an occasional breath of gas. Moreover, as the anaesthetist has the gas under complete control, he can raise and lower the degree of anaesthesia as often and as quickly as desired.

Dr. Flux at first used some textile fabric, such as a napkin, folded into an open cone; but he has since had two forms of inhaler made out of clear thin celluloid which is light, transparent, pliable, non-absorbent, and easily cleansed. One form is in the shape of a cone open at both ends, for use on patients in the recumbent posture; the other is open at the top and on one side for a patient sitting down. A rubber tube capable of inflation round the face aperture insures accurate adaptation in either form.

From seven to eight gallons of gas are required to induce anaesthesia in an adult, and from three to four gallons are required for each additional minute during which anaesthesia is to be maintained.

Dr. Flux thus describes the effect of this method of administration upon the patient: "After the first few breaths the agitation caused by apprehension subsides; the patient assumes a sleepy appearance, and, in from five to ten seconds, is unconscious; the breathing becomes steady and tranquil, and by the end of from fifty to eighty seconds the patient is completely anaesthetic, the only visible alteration being a change from a condition of wakefulness to one of sleep, which is so tranquil that onlookers who have not previously seen this method employed can hardly believe that the patient is ready for operation.

"No excitement, stertor, lividity, or convulsive movement, or any sign of asphyxia, occurs throughout the administration and resulting anaesthesia; in fact, the whole proceeding is characterized by extreme placidity. In no case has it been necessary to use force to restrain the patient either during or after the exhibi-

tion of the anaesthetic. Even when administering with unsuitable or improvised inhalers, or under adverse or previously untried conditions, the results have been almost uniformly satisfactory."

In the discussion which ensued, Mr. Baldwin and Mr. Carter Braine, both of whom had seen Dr. Flux administer gas by this method, and the latter of whom had had it tried upon himself, bore testimony to the efficiency of the method. The latter gentleman stated that so insensible was the change when he saw Dr. Flux administer the gas to patients for operation at the Dental Hospital of London that, although he watched the patients very carefully, he was unable to tell when they were anaesthetized. They appeared simply to drop off into a normal sleep. For himself, he had taken gas many times, but never so comfortably as in this instance. He breathed perfectly naturally and did not seem to be taking gas.

The testimony given was in favor of the open administration of nitrous-oxide gas, and Dr. Flux replied very satisfactorily to the few critical remarks based upon theoretical objections. The method, therefore, seems well worthy of an extended trial, as, if this procedure fulfills all it promises, it will open up a much wider field for the use of this comparatively safe anaesthetic.

THE LICENSE TO PRACTISE IN ILLINOIS.

UNDER the law which goes into effect, as we understand, on the 1st of July, the State board of health, which will continue to be charged with the function of passing upon the qualifications of applicants, is allowed to exercise its own discretion as to subjecting graduates of recognized Illinois schools to an examination. We learn, however, that in all probability the board will decide that all candidates, without exception, must pass the examination. This, we think, is by all means the most commendable course for the board to pursue. It would do away at once with any suspicion that the board was acting especially in the interest of the Illinois schools. Such a suspicion, we feel sure, would in any case be unfounded, but it might be entertained and made to serve the opponents of the board's work.

The board has not yet adopted any rules relative to the examination, and probably will not do so until its regular quarterly meeting, on July 11th, but our information is that it is likely to be in writing and in the subjects of anatomy, physiology, chemistry, materia medica and therapeutics, pathology and bacteriology, surgery, theory and practice of medicine, obstetrics, gynaecology, and hygiene and medical jurisprudence. All applicants for the examination must be graduates of

medical colleges in good standing, as may be determined by the board. Probably the first examination will be held in Chicago, beginning on July 26th and lasting for four days. It is announced that applications for the examination should not be made before July 1st.

It will be remembered that under the law now in force only applicants who are not graduates are necessarily subjected to examination. There can be no doubt, therefore, that the new law, in conjunction with recent legislation looking to the suppression of diploma mills and the prevention of successors to those suppressed, will prove powerful to put the regulation of practice in the State on a thoroughly satisfactory basis.

A DREAM CURE.

SEARCHING abroad for knowledge of what is going on in our own town, we find the Quebec *Revue médicale* for April 12th citing from the *Progrès médical* the description of a method of treating nervous excitability and kindred ailments by the induction of pleasing dreams. Dr. J. Leonard Corning uses a kind of pliable leather nightcap enveloping the entire head except the face. To the carapices are attached the rubber tubes of an Edison's phonograph. The patient, having donned the cap, lies down, preferably on his back, on a divan in a sort of tent, which incloses him entirely, the foot having a white screen as for a magic lantern. Behind the patient's head is a stereopticon which throws varied chromatic images on the white screen at the foot, and at the same time murmuring sounds are transmitted to the ears by the phonograph. Under this combined action of kaleidoscopic visual influences and the snurrus of the phonograph, which, no doubt, acts similarly to the "gentle murmurs of the rippling brook, or hum of insects in the sleepy air," it is said that a sense of pleasing fatigue takes possession of the patient, and that in the waking dream state which follows pleasant dreams ensue. Dr. Corning cites cases in which not only was sleep induced and the irritability calmed, but the bodily weight was increased under the influence of this treatment. The vast strides which have been made in recent years in our knowledge of the psychical effects of various remedies and their relations to the physical processes of the body should check any hasty skepticism, or rather should stimulate that true skepticism which puts all things susceptible of demonstration to experimental test, and our neurologists may well investigate what truth there is in this mode of treatment for nervous and mental troubles.

THE TUBERCULIN TEST FOR BOVINE TUBERCULOSIS.

A STRIKING example of the value of this test has recently, according to the *Lancet* for April 15th, been forthcoming in England. Her Majesty the Queen had on her home farm at Windsor a herd of forty cows, all apparently in perfect health and condition. These were tested with the tuberculin test, and in thirty-four of them the temperature rose in the typical fashion to about 101° F. Only five of the cows were apparently healthy. The whole herd was therefore ordered by her Majesty to

be killed, and the carcasses were examined by the Royal College of Veterinary Surgeons. Of the thirty-four whose temperature rose above 101° F., thirty-three were found to be tuberculous. The remaining animal was not tuberculous, but had a diseased uterus. The rise in this case was sudden and did not occur until after the twelfth hour. Of four cows which did not react, three were found to be free from tubercle and the fourth had one small caseous gland, in which tubercle bacilli were found. The two remaining cows, which had been classed "doubtful," were both found to be tuberculous. The new dairy herd at Windsor is to be formed only from cows which have been tested by tuberculin and found not to react. This story is satisfactory from two points of view: as showing, first, the value of the tuberculin test, and, secondly, as the Prince of Wales has always done, how the royal family of England lend the weight of their influence and example to all well-approved developments of sanitary progress and public welfare.

SKIAGRAPHY IN LEGAL MEDICINE.

THE *Revue médicale* for April 19th records the remarkable case of a coachman who was accused of having attempted to kill his mistress by firing a revolver at her head. He then turned the weapon on himself and shot himself in the breast. The bullets were extracted and the wounded people were cured. On being arrested, the coachman alleged that the weapon had gone off accidentally and that he had had no intention of harming his mistress. Only one ball had been found in the woman's head, near the ear, and the course taken by it rendered the hypothesis of accident plausible, in consequence of which the coachman was sentenced to only three months' imprisonment for serious injury caused by negligence. The *juge d'instruction*, however, ordered a skiagraphic examination to be made, which revealed that a second shot had been fired, and that this ball had lodged below the first. The course taken by this projectile, says the *Revue*, left no doubt that murder had been attempted. While the value of the means which demonstrated the presence of the second shot can not be gainsaid, we are not told whether there was or was not also a second wound of entrance. It seems incredible that if two shots had entered the body it should have been necessary to employ the skiagraph to prove that fact, upon which the assumption of intentional as against accidental wounding seems to have depended, although that apparatus might render signal service in locating the bullet.

A NEW SYMPTOM FOR THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

DR. MURAT (*Gazette hebdomadaire de médecine et de chirurgie*, March 5th) calls attention to a subjective symptom which he has found very frequently present in the subjects of incipient tuberculosis. As it causes no distress, patients, as a rule, are unaware of it until their attention is directed to it. It consists of a sensible vibration in the affected apex on loud speaking. Sometimes the patient instinctively tries to diminish this vibration by pressing the corresponding arm against the body. This symptom is a logical consequence of the induration of the lung tissue, and is akin in its nature to bronchophony, which it often precedes, however, as Dr. Murat is able to aver from his own observations. If a patient in whom an early phthisical condition is suspected is

instructed to make deep local expirations, and his attention is directed to this point, he will generally be able to recognize the vibration on the affected side, as though the tuberculous lung were in relation with the larynx, while no such sensation is perceptible on the sound side. A thorough investigation of this point would, if it substantiates Dr. Murat's opinion, place us in possession of a very valuable aid to the early diagnosis of pulmonary tuberculosis.

SOCIETY CONFEDERATION IN CHICAGO.

MEASURES tending to a closer organization of the medical profession are always favorable to its efforts and to its influence. We are glad, therefore, to learn from the May number of our excellent Chicago contemporary, *Medicine*, that most of the medical societies of that city have been practically merged in the Chicago Medical Society, although many of them preserve the control of their own affairs.

DISAGREEABLE EFFECTS FROM ORTHOFORM.

INASMUCH as orthoform has been said to be harmless, certain reports made at a recent meeting of the Paris Hospitals Medical Society (*Gazette hebdomadaire de médecine et de chirurgie*, April 20th) seem deserving of notice. M. Brocq stated that he had used it in solution and in the form of an ointment in the treatment of pruritus. In solution, he had found it irritating; in the form of a one-to-twenty ointment it was very efficacious in allaying itching, but in the course of two or three days there were always artificial eruptions which were themselves extremely itchy and sometimes protracted. He had observed very extensive cutaneous affections attributable to it and associated with general poisoning. M. Thibierge referred to the fact that Epstein also had seen general poisoning from the subcutaneous use of orthoform in conjunction with calomel, and reported that the punctures were extremely painful.

SPASTIC SPINAL PARALYSIS DUE TO INFLUENZA.

MYELITIS seems to be a far rarer sequel of influenza than encephalitis. Dr. L. Michaelis (*Deutsche medizinische Wochenschrift*, 1899, No. 7; *Wiener medizinische Blätter*, April 20th) states that not more than six cases have been reported. He records one characterized by paresis and spastic contractures of the legs, ending in recovery in about six weeks. The anatomical lesion, he remarks, can not have been severe; it was probably circumscribed, if, indeed, the symptoms were not due to a purely functional disturbance of toxic origin.

MAMMARY HYPERTROPHY AND UTERINE ATROPHY.

APART from pregnancy, the relations between the mammary glands and the uterine and ovarian functions are not very clearly defined. Dr. E. Frankel, of Breslau (*Deutsche medizinische Wochenschrift*, 1898, No. 25; *Centralblatt für Gynäkologie*, April 29, 1899), relates the case of a virgin, thirty years old, in whom great hypertrophy of the breasts had come on within four or five months, although they had been moderately enlarged for six months before. From the age of twenty-two to that of twenty-eight she had had amenorrhœa, and then the menses returned. The author is inclined to think that the mammary hypertrophy was connected with the

amenorrhœa and with a slight atrophy of the uterus, being occasioned by a sort of vicarious hyperæmia.

PAINFUL PARALYSIS IN CHILDREN.

SUBLUXATION from an unrecognized cause is not a very rare condition in children, and it may often be reduced by accident. This may or may not explain the sudden painful paralysis of a limb which M. Bertraud (cited in the *British Medical Journal* for April 22d) has recently made the subject of a thesis. It is generally an upper extremity that is affected. The least movement is painful, but there is no impairment of sensibility. Abatement usually follows within a few days. Passive motion is then practicable, and recovery soon ensues.

PASTEUR AND THE TOWN OF LILLE.

THE fact that Pasteur in the early part of his career was professor of chemistry and dean of the faculty of science at Lille renders that city an especially suitable place in which to commemorate his memory, as has been recently done by the unveiling of a monument to him there, and the opening of a handsome Pasteur institute, liberally subsidized by the local authorities. Dr. Calmette is the director, with a staff of nine officials and fourteen servants. The Pasteur institute of Lille, therefore, gives promise of being the centre of great and important future researches.

NEW JOURNALS.

AMONG the new American journals that have reached us recently are the *Jeffersonian*, published monthly by the undergraduates of the Jefferson Medical College, Philadelphia, and Dr. Karl von Ruck's quarterly, the *Journal of Tuberculosis*, published in Asheville, North Carolina. Both are handsome in appearance and promise to be useful additions to our periodical literature.

THE HEALTH OF PROFESSOR AUSTIN FLINT.

OUR readers will be glad to learn that as we go to press the news of Dr. Flint is that he is better and now almost certain to recover from his severe attack of pneumonia, which, we understand, occurred as a sequel of influenza.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending May 6, 1899:

DISEASES.	Week ending Apr. 29.		Week ending May 6.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	12	8	16	6
Scarlet fever.....	226	17	294	17
Cerebro-spinal meningitis.....	0	16	0	8
Measles.....	206	12	112	14
Diphtheria.....	25	2	174	28
Croup.....	8	0	4	3
Tuberculosis.....	170	148	165	192
Small pox.....	4	0	9	0
Chicken pox.....	50	0	14	0

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general for the week ending May 6, 1899:

Small-pox—United States.

Mobile, Ala.	Apr. 29.	1 case.	
Los Angeles, Cal.	Apr. 22-29.	1 "	1 death.
Washington, D. C.	Apr. 28.	1 "	
Jacksonville, Fla.	Apr. 23-30.	9 cases.	
Chicago, Ill.	Apr. 17-29.	2 "	
New Orleans, La.	Apr. 22-29.	16 "	1 "
Shreveport, La.	Apr. 22-29.	2 "	
Baltimore, Md.	Apr. 30-May 2.	2 "	
Boston, Mass.	Apr. 17-26.	9 "	
Michigan.	Apr. 22-29.	Present at two places (Benton Harbor and Kalamazoo Township).	
Las Cruces, New Mexico.	Apr. 27.	Many new cases.	
Buffalo, N. Y.	Apr. 29.	1 case.	
Cincinnati, Ohio.	Apr. 21-28.	15 cases.	2 deaths.
Erie, Pa.	May 2.	1 case.	
Pittsburgh, Pa.	Apr. 22-29.	1 "	
Del Rio, Texas.	Apr. 18.	1 "	
Galveston, Texas.	Apr. 15-22.	8 cases.	
Newport News, Va.	Apr. 23-May 1.	4 "	
Norfolk, Va.	Apr. 23-May 3.	4 "	1 death.
Portsmouth, Va.	Apr. 23-May 3.	15 "	
Spokane, Wash.	Apr. 22-29.	2 "	

Small-pox—Foreign.

Rio de Janeiro, Brazil.	Mar. 11-24.	11 deaths.	
Hongkong, China.	Mar. 11-25.	4 cases.	3 "
Barraquilla, Colombia.	Apr. 1-8.	2 "	
London, England.	Mar. 8-15.	3 "	
Tamsui, Formosa.	Feb. 10-Mar. 10.	88 "	2 "
Athens, Greece.	Apr. 8-15.	16 "	5 "
Bombay, India.	Mar. 28-Apr. 4.	10 "	
Calcutta, India.	Mar. 18-25.	6 "	
Madras, India.	Mar. 11-25.	1 death.	
Seoul, Korea.	Mar. 11-18.	Small-pox present.	
Chihuahua, Mexico.	Apr. 8-22.	3 deaths.	
Mexico, Mexico.	Apr. 16-23.	16 cases.	5 "
Bluefields, Nicaragua.	Apr. 15-22.	1 case.	
St. Petersburg, Russia.	Apr. 1-15.	30 cases.	8 "
Constantinople, Turkey.	Apr. 10-17.	10 "	
Smyrna, Turkey.	Apr. 8-15.	1 death.	

Yellow Fever.

Rio de Janeiro, Brazil.	Mar. 10-24.	112 cases.	88 deaths.
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Cholera.

Bombay, India.	Mar. 28-Apr. 4.	3 deaths.	
Calcutta, India.	Mar. 18-25.	17 "	

Plague.

Tamsui, Formosa.	Feb. 10-Mar. 10.	201 cases.	123 deaths.
Madras, India.	Apr. 18-24.	1 death.	

The Long Island College Hospital.—Professor A. J. C. Skene, M. D., has been appointed emeritus professor of gynecology. The chairs of obstetrics and gynecology have been combined, under Professor Charles Jewett, M. D. The department of bacteriology has been added to that of pathology, under Professor J. M. Van Cott, M. D. The department of histology has been assigned to Professor W. W. Browning, of the chair of anatomy. The following appointments have been made: Henry H. Morton, M. D., clinical professor of genito-urinary diseases; Robert L. Dickinson, M. D., assistant professor of obstetrics; Gordon R. Hall, M. D., assistant professor of the practice of medicine; George McNaughton, M. D., and Ernest Palmer, M. D., lecturers on gynecology; Wilbur H. Seymour, M. D., lecturer on histology and instructor in pathology; C. E. Gunther, M. D., instructor in clinical medicine; Clarence R. Hyde, M. D., H. P. de Forest, M. D., and Jarvis S. Wight, Jr., M. D., instructors in the obstetric manikin; Homer E. Fraser, M. D., assistant to the chair of genito-urinary diseases;

Briton H. Richardson, M. D., assistant to the chair of anatomy; Walter Truslow, M. D., William S. Hubbard, M. D., and Joseph O. Kilgariff, M. D., assistants to the chair of orthopaedics; John C. Cardwell, M. D., demonstrator of physiology; and Sewall Matheson, M. D., and Daniel C. Mangan, M. D., assistants to the chair of chemistry and toxicology. A summer course has been established, to begin on May 18th and to close about August 1st. This will consist of recitations and hospital clinics.

Tuberculous Diseases in Havana.—From a review in the *Habana Medica* for April, on Dr. Antonio Gordon y Acosta's book *La Tuberculosis en la Habana desde el Punto de Vista Social y Económico*, we learn that in the quinquennium 1892-'98, 11,970 persons died of phthisical diseases.

The Sportsmanlike Spirit as a Factor in Evolutionary Progress.—Professor Hardie, at the Edinburgh University spring graduation, concluded his address to the new graduates by pleading for a little more of the spirit of sport in the serious business of life; that the same kind of resolution, self-sacrifice, and energy should prevail in both; and that training and good condition, soundness in mind and body, should be looked on as no less essential in the one than in the other. He quoted finally the words of the Harrow song:

"God give us bases to guard or beleaguer,
Games to play out whether earnest or fun,
Fights for the fearless and goals for the eager,
Twenty and thirty and forty years on!"

The Gouverneur Hospital.—We are informed that Dr. Henry M. Silver has been transferred from the medical to the surgical visiting staff of Gouverneur Hospital.

The Buffalo Academy of Medicine.—At the last meeting of the Section in Medicine, on Tuesday evening, the 9th inst., Dr. Joseph W. Grosvenor read a paper on *The Use of Alcohol in the Treatment of Diseases*, which was discussed by Dr. Henry R. Hopkins, Dr. A. L. Benedict, Dr. E. L. Frost, Dr. Sydney A. Dunham, and Dr. J. Grafton Jones.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 6th inst., Dr. J. B. Ross presented the conclusion of his paper on *Antitoxine, Therapeutically Useless and Biologically Faulty*, and Dr. Joseph Grindon presented a case of scleroderma.

The Richmond Academy of Medicine and Surgery.—At the last meeting, on Tuesday evening, the 9th inst., the subject for discussion was *Sarcoma of the Kidney*, which was opened by Dr. J. M. Winfree.

Changes of Address.—Dr. Charles A. Clinton, to No. 112 West One Hundred and Thirty-first Street, New York; Dr. Andrew F. Currier, to No. 113 East Fortieth Street, New York; Dr. J. Carlisle de Vries, to No. 1309 L Street, N. W., Washington, D. C.; Dr. Allen Pitch, to No. 38 West Fifty-sixth Street, New York; Dr. Leopold Harris, to No. 66 Columbia Street, New York; Dr. Justin Herold, to No. 325 East Eighty-seventh Street, New York; Dr. C. N. Holmes, to No. 402 West One Hundred and Forty-fifth Street, New York; Dr. E. P. Livingston, to No. 460 West One Hundred and Fifty-second Street, New York; Dr. Heinrich Stern, to No. 56 East Seventy-sixth Street, New York.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 29 to May 6, 1899:*

BAXISTER, WILLIAM B., Captain and Assistant Surgeon, is relieved from further duty at Fort Keogh, Montana.

BEVANS, JAMES L., Acting Assistant Surgeon, United States Army, is relieved from further duty at St. Louis, and will proceed to San Francisco and report to the commanding general, Department of California, for duty.

FURBUSH, CHARLES L., Acting Assistant Surgeon, United States Army, is relieved from further duty on the hospital ship *Missouri* and will proceed to Havana and report to the commanding general, Division of Cuba, for duty.

KENNEDY, JAMES M., Captain and Assistant Surgeon, is relieved from further duty pertaining to the muster-out of troops at Augusta, Georgia, and will proceed to the Presidio of San Francisco and report to the commanding officer, Fourth Cavalry, for duty, to accompany that regiment to Manila.

OWEN, WILLIAM O., Major and Surgeon, United States Volunteers, will proceed to St. Louis and assume the duties of attending surgeon and examiner of recruits, reporting to the commanding general, Department of the Missouri.

SHAW, HENRY A., Captain and Assistant Surgeon, is relieved from further duty at Savannah, and also from duty and station at Fort Snelling, Minnesota, and will proceed to San Francisco and report to the commanding officer of the general hospital at that place for duty.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 6, 1899:*

BRAISTED, W. C., Passed Assistant Surgeon. Detached from the Naval Hospital, Newport, Rhode Island, and placed on waiting orders for sea duty.

BYRNES, J. C., Surgeon. Detached from the Norfolk Navy Yard and ordered to the *Massachusetts*.

COSTIGAN, G. D., Assistant Surgeon. Detached from the *Indiana* and ordered to the Naval Hospital, Chelsea, Massachusetts.

DICKSON, S. H., Surgeon. Detached from the *Massachusetts* and ordered home to await orders.

DRENNAN, M. C., Medical Inspector. Ordered to additional duty at the marine recruiting rendezvous, Philadelphia.

EDGAR, J. M., Surgeon. Detached from the *Richmond* and ordered to the *Amphitrite*.

ELLIOTT, M. S., Assistant Surgeon. Detached from the *Texas* and ordered home to await orders.

FITZSIMMONS, P., Medical Inspector. Detached from the *Brooklyn* and ordered to the *New York* as fleet surgeon of the North Atlantic Squadron.

GARTON, W. M., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the *Annapolis*.

GATEWOOD, J. D., Surgeon. Ordered to the Bureau of Medicine and Surgery for temporary duty.

GINON, A. L., Medical Director, retired. Granted leave of absence for one year, with permission to leave the United States.

GRAYVATT, C. F., Medical Inspector. Detached from the *New York* and from duty as fleet surgeon of the

North Atlantic Squadron and ordered home to await orders.

HARMON, C. E. H., Surgeon. Detached from the *Amphitrite* and ordered to the *Brooklyn*.

LUMSDEN, G. P., Surgeon. Detached from the *Franklin* and ordered to the *Richmond*.

OLCOTT, F. W., Passed Assistant Surgeon. Ordered to the *Texas*.

PALMER, S. B., Assistant Surgeon. Detached from the *Annapolis* and ordered home.

PAYNE, J. H., Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the *Indiana*.

SNYDER, J. J., Assistant Surgeon. Detached from the *Wabash* and ordered to the Naval Hospital, Newport, Rhode Island.

STEELE, J. M., Surgeon. Ordered to temporary duty at the recruiting rendezvous, Baltimore.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending May 4, 1899:*

WHEELER, W. A., Surgeon. Department letter of April 21, 1899, granting Surgeon Wheeler twenty-seven days' leave of absence from June 4, 1899, amended so that the said leave shall take effect from May 5, 1899. Department letter of April 20, 1899, accepting the resignation of Surgeon Wheeler, to take effect from June 30, 1899, amended so that said resignation shall take effect May 31, 1899.

BROOKS, S. D., Surgeon. Relieved from duty as member of board convened to meet at San Francisco, California, May 2, 1899, for the examination of candidates for appointment as assistant surgeon in the service.

MAGRIDER, G. M., Passed Assistant Surgeon. Granted leave of absence for fourteen days.

PERRY, T. B., Passed Assistant Surgeon. Detailed as a member of the board convened to meet at San Francisco, California, May 2, 1899, for the examination of candidates for appointment as assistant surgeon in the service.

WERTENBAKER, C. P., Passed Assistant Surgeon. To rejoin station at Wilmington, North Carolina.

HASTINGS, HILL, Assistant Surgeon. Relieved from duty at Seattle, Washington, and directed to proceed to Astoria, Oregon, for the purpose of establishing a United States quarantine station at or near that point.

RUSSELL, H. C., Assistant Surgeon. Relieved from duty at Louisville, Kentucky, and directed to proceed to Cairo, Illinois, and assume temporary command of service.

PARKER, H. B., Assistant Surgeon. Detached as quarantine officer of the port of Santiago, Cuba.

LEWIS, L. L., Assistant Surgeon. To proceed to Seattle, Washington, and assume command of service.

ANDERSON, J. E., Assistant Surgeon. Granted thirty days' extension of sick leave from May 1, 1899.

FRICKS, L. D., Assistant Surgeon. Relieved from duty on United States transport *S. F. Cook* and directed to assume temporary command of service at Savannah, Georgia.

KEIR, J. W., Assistant Surgeon. To proceed to the San Francisco Quarantine Station and report to the commanding officer for temporary duty.

SCOTT, E. B., Hospital Steward. To report to acting assistant surgeon in charge, Savannah Quarantine, for duty and assignment to quarters.

COMFORT, N. C., Hospital Steward. Relieved from duty at Cincinnati, Ohio, and directed to proceed to Louisville, Kentucky, and report to commanding officer for duty and assignment to quarters.

Society Meetings for the Coming Week:

MONDAY, May 15th: New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, May 16th: Illinois State Medical Society (first day—Cairo); Missouri State Medical Association (first day—Joplin); Pennsylvania State Medical Society (first day—Johnstown); New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, New York, Medical Association; Syracuse, New York, Academy of Medicine; Medical Societies of the Counties of Chemung (annual), Essex (annual—Elizabethtown), Kings, Livingston (annual), Schoharie (annual), St. Lawrence (annual), Washington (annual), and Westchester (annual—White Plains), New York; Hampden, Massachusetts, District Medical Society (annual—Springfield); Baltimore Academy of Medicine.

WEDNESDAY, May 17th: Kentucky State Medical Society (first day—Louisville); Illinois State Medical Society (second day); Missouri State Medical Association (second day); Pennsylvania State Medical Society (second day); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, May 18th: Kentucky State Medical Society (second day); Illinois State Medical Society (third day); Missouri State Medical Association (third day); Pennsylvania State Medical Society (third day); New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, of St. Louis; Atlanta Society of Medicine.

FRIDAY, May 19th: Kentucky State Medical Society (third day); New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Births, Marriages, and Deaths.

Married.

DOUGLAS—CHRISTIE.—In New York, on Wednesday, May 3d, Mr. Henry Percy Douglas and Miss Katharine Ross Christie, daughter of Dr. Thomas H. L. Christie.

HOLMES—LENKE.—In Newport, Rhode Island, on Saturday, April 29th, Dr. Kirk W. Holmes, of Cos Cob, Connecticut, and Miss Hedwig L. Lenke.

KENYON—QUIMBY.—In Titusville, Pennsylvania, on Wednesday, May 3d, Dr. George H. Kenyon, of

Providence, Rhode Island, and Miss Emma May Quimby.

SWARTZLANDER—EVANS.—In Pottstown, Pennsylvania, on Thursday, May 4th, Dr. Frank B. Swartzlander, Jr., of Doylestown, Pennsylvania, and Miss Florence R. Evans.

WOLFE—GOODWIN.—In Thomaston, Connecticut, on Tuesday, May 2d, Mr. Francis J. Wolfe and Miss Grace Goodwin, daughter of Dr. Ralph Schuyler Goodwin.

Died.

BORDIS.—In Assumption, Louisiana, on Monday, May 1st, Dr. Gaston C. Bordis, in the fifty-second year of his age.

BOWSER.—In Brooklyn, on Thursday, May 4th, Dr. Willard Parker Bowser, in the fiftieth year of his age.

FINCH.—In Fort Ann, New York, on Saturday, May 6th, Dr. Sarah Finch, aged sixty-one years.

GODDING.—In Washington, on Saturday, May 6th, Dr. William Whitney Godding, in the sixty-ninth year of his age.

KIRKBRIDE.—In Philadelphia, on Thursday, May 4th, Dr. Joseph John Kirkbride, in the forty-eighth year of his age.

RUSSELL.—In Barre, Massachusetts, on Saturday, May 6th, Dr. W. L. Russell, in the one hundredth year of his age.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XVIII.

RIGHT TO COMPENSATION; FAILURE TO BENEFIT PATIENT
NO NECESSARY BAR TO RECOVERY OF COMPENSATION.

(Continued from page 647.)

Rights under Contract "No Cure, No Pay."—The contract of "no cure, no pay" is probably one which is not very frequently entered into by the most reputable class of the medical profession, although there is, at least, no legal reason why it should reflect any suspicion of discredit upon the physician who is a party to it. When a physician agrees to such an arrangement, and there is no specific price fixed as the compensation for performing a cure, the physician will be entitled to the reasonable and usual sum for performing such services. But before he is entitled to any compensation whatever he is bound to show that he fulfilled his agreement and effected a cure. Where a physician undertook the treatment of a patient upon the plan under consideration, and soon afterward, fearing that the patient was financially irresponsible, represented to the patient's son the propriety of securing the payment by his own written obligation, whereupon the son gave the doctor a memorandum reading as follows: "I hereby agree that I will be holden to Dr. J. S. for the payment of his bill for medicine and attendance upon my father and his wife"—while this agreement of the son was positive in form, it was subsequent in time to the original agreement of the physician and doctor, the basis of which was "no cure, no pay," and was therefore collateral to it, and the physician was not permitted to collect upon the

written agreement without first showing that he had effected a cure.* When a patient enters into an agreement with a physician to be treated upon the basis of "no cure, no pay," he is bound by such agreement to submit to all reasonable treatment prescribed for such a time as may be reasonably calculated necessary to effect the cure. Should the patient refuse to do this, thus rendering it impossible for the physician to complete the cure and reap the benefit of his skill and labor, he is entitled, upon showing such facts, to receive compensation without performing any further services. The amount of compensation to which he would be entitled would depend upon the terms of the contract. If the contract fixed a specific amount as the price of successful treatment, he would be entitled to receive that amount at once; but if the contract was silent as to the amount of compensation, he would be entitled to a reasonable and usual fee for the services already rendered. The patient might, however, in the latter case, for the purpose of proving the services to be without value, introduce evidence to show that the treatment prescribed was not calculated to produce beneficial results, and that the medicine used was worthless and possessed no efficacy in producing the results desired; and for the purpose of proving this the physician may be required to testify as to the ingredients of the medicine used, even though it be a secret preparation of his own.†

A Tennessee case of some years ago, based upon a contract of the character in consideration, was tried, which somewhat amusingly illustrates the prohibition of a certain class of laymen to avoid the payment of a professional bill whenever possible.

In this case a physician contracted with an habitual drunkard to cure him of his unfortunate affliction in consideration of the payment of five hundred dollars.

The treatment seems to have been successful to such an extent that the patient, after using the medicine prescribed, quit his habits of intoxication, and told his friends that he had lost his appetite for ardent spirits, but that he thought he could again acquire his appetite for spirits by beginning with cider or wine. He continued sober for about nine months and then returned to his habits of intoxication. How he acquired the appetite again is not shown.

The question of whether or not drunkenness is a disease that can be cured by medical skill was interposed; the jury was instructed that if the physician was entitled to recover they must find it so to be, and that the physician had not only suppressed or suspended the appetite for a season during the operation of the medicine, but had so far removed it that it would not return unless the patient indulged in such a manner as to a temperate man brings on the propensity. Upon this instruction the jury rendered a verdict for the patient, and the physician promptly appealed.

The supreme court theorized to some extent upon the nature of drunkenness, and concluded that it was a disease produced by the indulgence of a habit, and that if the disease or disposition to drink were destroyed, its return by renewed indulgence proved a disregard of that sense of moral principle which a rational being would be expected to exercise. Applying these theories, the court said: "To admit that after being so placed (the disposition to drink being destroyed) he might return, is to admit that by his own voluntary act he

could defeat the physician of his promised reward; and it would hence follow that, by taking advantage of his own wrong, the physician would have the twofold mortification of losing his fee and seeing his skill mocked at. Therefore it should have been left to the jury to say whether, if the propensity had been destroyed, the patient returned to his habits of drunkenness with the dishonest purpose of evading the contract." The judgment of the trial court was reversed and the case sent back for a new trial upon the lines indicated in the opinion.*

Relevant to the question in consideration is a case which was decided in South Carolina in 1829 and which was never officially reported, but is preserved in the manuscript of the court. In that case a physician undertook to cure a child of a chronic disease with the understanding that he would not charge more than five dollars if not successful. The parent, believing that the child was cured, promised to pay him one hundred dollars, but it afterward appeared that the disease was not cured, but only suspended. The court refused to hold the parent to his agreement to pay one hundred dollars made under his mistaken belief, but remitted the physician to his original agreement.†

Intent that Services shall be Gratuitous; Effect.—Whether or not the intent of the physician at the time he renders services to a patient that such services shall be gratuitous will defeat his right to compensation is a question upon which there is some conflict. The supreme court of North Carolina lays down the rule that if such services "were intended to be, and were accepted as a gift or act of benevolence," then the physician is not entitled to compensation; but if the patient did not understand that such services were intended as gratuitous, and accept them as such, the physician is entitled to compensation, even though he originally intended to make no charge.‡ On the other hand, the court of appeals of Missouri holds that if the physician rendered his services intending them to be gratuitous, he could not subsequently change his mind and collect for them, even though the patient did not know when the services were rendered that they were intended to be gratuitous.§

A careful and critical examination of the reasoning upon which these two decisions are based leads to the opinion that the North Carolina decision is not well founded, and that the Missouri court expresses the true doctrine.

The North Carolina court subjects the transaction to the same test as that required to demonstrate the validity of an ordinary contract—viz.: that there shall be a meeting or concurrence of minds of the parties, and that there shall be a mutual understanding which is agreed to by both. These undoubtedly are necessary elements to the validity of a contract, but, as a matter of fact, the transaction in consideration is not a contract, but a gift, and is accordingly to be governed by the law relating to gifts.

The essential elements of a gift are that the donor or giver shall actually or symbolically deliver the property which is the subject of gift to the donee with the intention that it becomes the donee's without the payment of any consideration. In this case the physician represents

* South ex. Hyde, 49 Vermont, 54.

† Jones ex. King, 81 Ala., 285.

* Lock ex. Townsend, 7 Ala., 116.

† Harris ex. Osher, 56 C. C. MS., Dec., 1879.

‡ Prince ex. McKim, 81 N. C., 64.

§ Lippman ex. Titman, 1 Mo. App., 69.

the donor, the patient the donee, and the services rendered constitute the subject of gift. The services are rendered by the physician with the intent that they shall be gratuitous; the services being received, the gift is completed and perfect, whether the patient knew them to be gratuitous or thought them to be otherwise and expected to pay; for, to quote the words of Chief-Justice Sterrett, of the supreme court of Pennsylvania: "It is now too well settled to admit of question that, upon the ground of implied benefit, the assent of a donee will be presumed; and the title will vest *eo instanti* the gift is made, even though he be ignorant of the transaction, and will continue in him until he rejects it."* Moreover, if the services were intended as a gift when rendered, the physician can not subsequently change his mind and collect fees for such services even though it may have been through a misapprehension or mistake of facts that he was induced to originally intend the services as gratuitous.†

Whether or not it was the physician's intention that his services should be gratuitous is a question of fact which in the court of trial must be determined by the jury from the evidence submitted to them. All of the attending circumstances of the treatment, the relation of the physician and patient, the statements of the physician relative to compensation for such treatment, and the fact of whether or not the physician made a charge for such services at the time they were rendered, as shown by his books of original entry, are all circumstances to be taken into consideration in determining the intent.

Intoxication of Physician, Effect of, upon Right of Recovery.—A physician who attempts to render medical services when in such an intoxicated condition as to be unable to exercise proper skill and judgment is not entitled to any compensation for such services; but a patient who continues to employ a physician after he has rendered services in an intoxicated condition is not in a position to refuse paying his fee because of such past drunkenness.‡

Services among Physicians; Right to Compensation.—There is among physicians a custom to render services for each other without compensation. Whether or not this custom is sufficiently established and so generally understood as to defeat the right of a physician to compensation for services rendered to another physician has been considered by the supreme court of Georgia to be a matter of fact, which must be proved by evidence. If the evidence shows that it merely exists as a courtesy, and is not of universal observance, then the physician is entitled to compensation, unless, of course, there was an understanding or intention that the services were to be gratuitous. If, on the other hand, the evidence shows that the practice is so universal as to justify a physician treated in the belief that the custom becomes a part of the contract, then the right of compensation does not exist."

Carelessness in Regard to Contagious Diseases, Effect of.—It has been observed that a physician is bound to take such precautions as may be necessary to prevent the transmitting of a contagious disease from one patient to another. It naturally follows that if a physician disregards this duty, and a patient thereby

becomes afflicted with such contagious disease, the physician's right to compensation for services rendered to him is defeated to the extent of the damages suffered from the contagious disease.*

Promissory Note for Future Services Conditional.—Physicians sometimes undertake the treatment of a patient for a certain fixed fee or sum, and at the beginning of the treatment require the patient to execute a note for all or a part of the fee agreed upon. The consideration upon which such a note is based is the future rendering of professional services, and this class of services necessarily means personal services, and not the services of some assistant or other doctor; it therefore follows that if the physician entering into such a contract is from sickness or other cause rendered incapable of performing such services when due, under the contract the patient is relieved from his obligation to pay, and the note may be repudiated for failure of consideration.†

Partial Allowance by Municipality Extinguishes Claim against Patient.—A physician who attends a poor person under such circumstances as to bind the town or county for the payment is entitled to look for his compensation either to the municipality or to the patient; but if he presents his bill for such services to the municipality, and it is audited and allowed either at its face value or for a less amount, and the physician accepts the amount allowed, the indebtedness is completely extinguished both against the patient and the municipality. A case recently arose in New York involving this question. A physician rendered services to the value of eighty dollars. The patient being a poor person, he submitted the bill to the town "as health officer," and received twenty-five dollars. The patient subsequently performed services for the physician to the amount of twenty dollars, against which the physician proposed to offset his "balance" of fifty-five dollars. The supreme court was of the opinion that the trial court was authorized in finding from the facts that the physician's bill, interposed as a counterclaim, was for services performed for the town, and for which the town was liable. The court said: "The sum audited he accepted, and the effect of said transaction was necessarily to extinguish the claim against the town. If there was any liability on the part of the plaintiff (patient), as well as the town, for the defendant's (physician's) attendance upon his family, which defendant might have properly claimed, his presentation of the bill to the town, and acceptance of the amount at which it was audited, we think must have the effect of also extinguishing the claim against the plaintiff."‡

The judgment of twenty dollars in favor of the patient for services rendered to the physician was therefore approved and sustained by the supreme court.

Pith of Current Literature.

Death from Inhaling Nitric-acid Fumes.—Dr. H. S. Pearse (*Albany Medical Annals*, January) records the case of four firemen attending a fire caused by the

* *Tarr et al. vs. Robinson et al.*, 158 Pa. St., 60.

† *Pekelny vs. Starr*, 149 N. Y., 437.

‡ *McKeroy vs. Newell*, 73 Ga., 637.

" *Madden vs. Blain*, 66 Ga., 49.

* *Piper vs. Menifer*, 12 B. Monroe (Ky.), 465.

† *Powell vs. Newell*, 59 Minn., 406; 61 N. W. Rep., 335.

‡ *Wood vs. Munson*, 70 Hun., 468; 53 N. Y. S. R., 621; 24 N. Y. Supp., 287.

breaking of a carboy of nitric acid. The fire was quickly extinguished, and at the time none of the men felt any effects from the fumes of the acid; however, about six hours later, three of the men began to feel a rawness of the air-passages, and compression of the right thorax—one vomited a little; but those symptoms all disappeared within twenty-four hours. The fourth man, about the same time, complained of severe pains in chest, and difficulty in swallowing and talking. He walked three blocks to his home and was seen by Dr. C. H. Richardson and Dr. Pearce about 10.30 P. M.—eight hours and a half after inhaling the fumes. There was marked dyspnea; respirations were forty a minute, and very painful; voice husky; pulse 100, good quality; temperature elevation slight; pharynx very red; mucous membrane swollen; respiratory murmur high-pitched and harsh over bronchi and right lung, left lung not involved; some expectoration of bloody mucus. An unfavorable prognosis was given. Sedatives and neutralizing inhalations were prescribed. The patient was seen again early next morning; patches of consolidation had developed in the right lung with commencing oedema; there was slight cyanosis of the lips, finger nails, and ears; the pulse was rapid, but good in quality; the patient rational, but at 12 M., when moved to the hospital, he was slightly delirious. At three o'clock he became unconscious and very cyanotic; oedema was marked in both lungs, the left being less involved than the right; mucus slightly tinged with blood ran constantly from the mouth; the pulse was rapid and irregular; the temperature did not reach 101° F. (Oedema of the glottis being expected, preparations were made to meet it by tracheotomy. Stimulants and inhalations of oxygen were prescribed, and a pneumonia jacket and poultices applied to the chest. The patient died at 7 P. M., twenty-nine hours after inhalation of the fumes.

Dr. Pearce says that few similar cases have been reported, though numerous deaths have followed the inhalation of the fumes of this acid. The only peculiar feature in this case was the long delay in the development of the symptoms. The same peculiarity existed in the series, however. When a large amount is inhaled it is rapidly fatal—a broncho-pneumonia develops quickly, with subsequent oedema of the lungs, and death within twenty-four or thirty hours. Spasm of the glottis may occur immediately after inhaling the fumes and produce fatal asphyxia or oedema later, with the same result.

The Danger of Syphilitic Infection to Physicians.—Dr. L. Blake Baldwin (*Chicago Medical Recorder*, April) says that we, as physicians, hardly realize the danger of infection when examining patients, or the number of physicians that suffer from syphilis contracted in this way. Among forty-seven cases of extra-genital chancre reported by Fournier, thirty occurred in physicians and midwives. Dr. Blake can cite many cases in Chicago among physicians who have contracted syphilis in making examinations, performing obstetrical operations, making autopsies, dissecting, etc. After citing cases, he says that his experience with syphilis in physicians leads him to the conclusion that it is more serious with them than in the case of laymen, not because physicians are more susceptible to the syphilitic virus, but owing to the fact that from familiarity with the disease the physician either underestimates the danger and becomes careless in the treatment of his own case, or, in his anxiety to remove the manifestations of

the disease, he acts upon the advice of several of his colleagues at the same time, and thus becomes the victim of overmedication, to the detriment of his general health, and, owing to this lowered vitality, he becomes an easy prey to the disease itself. This conclusion has also been reached by Fournier in an article published in 1896.

Hydrochloride of Phenocoll in Grippe.—Dr. Giovanni Villani (*Gazzetta medica lombarda*, December 19, 1898) says that hydrochloride of phenocoll exerts a marked antithermic action in a period of time varying from half an hour to six hours. It is an excellent antiseptic, and a most useful antipyretic and analgetic in even the most severe and varied forms of neuralgia. It is easy of administration both to adults and children, the faintly salt and bitter taste being masked by syrup. The use of increasing doses is not necessary, as the organism does not apparently become habituated to it, nor is the excitability of the central nervous system diminished by its use. It is quickly absorbed and rapidly produces its effects, being constantly eliminated in the urine, its elimination beginning after twenty minutes, and being completed in from fifteen to twenty hours. In grave conditions and in young children this drug does not, the author says, produce either nausea, vomiting, collapse, or any other disturbance. It lowers the temperature in a regular and continuous manner, often producing slight cutaneous transpiration, more rarely sweating. It acts not only on the great nervous centres, the cerebellum and spinal cord, but also on their peripheral ramifications, producing a slight warmth in the head and flushing of the face. It determines, although not constantly, varying degrees of dilatation of the pupil, especially in somewhat large doses, the mydriasis persisting even after all other characteristic symptoms of phenocoll have disappeared.

The author lauds this drug, which may be administered in powder or in watery solution, either by the mouth or hypodermically, as a very valuable specific remedy for the treatment of influenza, having himself used it in upward of four hundred cases to his entire satisfaction. The amount used was from thirty to forty-five grains daily, administered in powders of seven grains and a half each for adults, and, for children, from fifteen to twenty-two grains and a half in solution in the course of twenty-four hours.

Bacteria and the Blood.—Dr. Franklin W. White (*Journal of the Boston Society of Medical Sciences*, February 21st), as a result of researches presented in the pathological laboratory of the Massachusetts General Hospital, summarizes his conclusions as follows: 1. Blood for bacteriological examination during life must be taken directly from the veins, and in considerable quantity. 2. Resorption of toxins is the most important feature of cases of sepsis; pyogenic bacteria invade the general circulation in a rather small proportion even of severe cases, and, as a rule, late in the course of disease. 3. A general infection by the pneumococcus can be demonstrated occasionally in the late stages of lobar pneumonia. 4. The value of blood cultures as a means of diagnosis in obscure cases of sepsis is limited by the fact that invasion of the blood by the specific organism can not be demonstrated during life in the majority of cases. Positive cultures are very valuable; negative cultures do not exclude local septic infection. 5. The detection of specific bacteria in the blood in cases of sepsis and pneumonia gives a very unfavorable prognosis in most cases. 6. General terminal infections

with pyogenic cocci occasionally occur as an immediate cause of death in chronic disease. Local infectious processes play this part more frequently. 7. As far as our experiments have shown, invasion of the blood by bacteria during the death agony, with subsequent distribution of the germs to the organs by the circulation, is a rather uncommon occurrence.

The Histopathology of Syphilis.—Dr. Maximilian Herzog (*Chicago Medical Recorder*, April) concludes a paper on this subject as follows: 1. As has long been known from clinical observations, syphilis primarily infects the lymphatic system and spreads by the lymphatics. 2. The infection of the blood-vessels occurs from the perivascular lymph spaces. The veins are less resistant, and consequently show the most marked changes, while the arteries, certainly in the earlier lesions, are not so prominently affected as the veins. 3. The specific living syphilitic poison is originally and probably permanently located in the lymphatic system, whence it invades the blood-vessels and leads to the appearance of general manifestations. After such a general outbreak there is established, either in consequence or independent of an antiluetic treatment, a hematogenous immunity. This latter, however, lasts only a limited period of time, when a new invasion of the blood-vessels from lymphatic foci may take place. Whether a final complete hematogenous and histogenous immunity may be established with the proper treatment or without it, is a question for discussion.

Salicylate of Sodium in Orchiepididymitis.—M. Pigot (*Gazette hebdomadaire de médecine et de chirurgie*, April 23d), in a thesis to the Faculty of Paris, considers salicylate of sodium superior to all other remedies employed hitherto in cases of orchiepididymitis where there is intense pain, but where the spermatic cord and the tunica vaginalis are but slightly affected. It does not act so well when the cord participates in the inflammation or when there is much swelling of the inflamed tunic. In the latter case the author recommends inunction of the cord with mercurial ointment and belladonna; while in the former, styphage, with or without puncture of the tunica, according to circumstances, is recommended.

A Forward Dislocation of the Sacrum.—M. Wilhelm (*Annales de chirurgie et d'orthopédie*, February) recently showed to the Medical Society of Nancy a patient with luxation of the sacrum. He had been caught under a freight elevator carrying two mineral cars weighing upward of two tons. He was pinned face downward, and was only released after twenty minutes. He was then comatose and cyanosed in the face, neck, and thorax. The pulse was small and threadlike. The patient was given injections of caffeine and etherized. The small quantity of urine obtained was clear at first, but slightly bloody at the end. The following day consciousness was more or less restored. The pulse was 120. Auscultation showed sibilant rhonchi disseminated through the chest. Some days later hematuria ensued, but this was not repeated. Five days later still, decided amelioration was manifest, but there were persistent pains in the sitting posture. Examination of the dorso-lumbar region showed a large ecchymosis and a deformity which, on the patient's lying down, conferred a saddle shape on the lumbar region. In the sitting posture a dorsal scoliosis and a lumbo-sacral lordosis became manifest. Pain was experienced in the recumbent position. A week later the patient could raise himself and began to walk

with difficulty with the aid of two sticks. The cyanosis of the face and thorax, the dorso-lumbar ecchymosis, the dorsal scoliosis, and the lumbo-sacral lordosis persisted. The patient lying down, the sacrum seemed to project from behind forward as though sunk in between the two iliac bones, which formed posteriorly an abnormal angle.

The patient's gait resembled that of a person with dislocation of both hip joints. His height, moreover, was diminished since the accident by six centimetres (about two inches and a quarter). There was no paralysis of the lower limbs, but the reflexes were exaggerated. The diagnosis made was that of a forward dislocation of the sacrum, which is very rare, only a few cases having been recorded, three of them by Malgaigne.

Supra-arterial Epicardial Fibroid Nodules.—In the March number of the *Journal of Experimental Medicine* there is an excellent article on this subject, by Dr. J. H. Mason Knox, Jr., of the pathological laboratory of the Johns Hopkins University and Hospital, based on a histological study of five well-marked examples found in making autopsies during the last few months.

These supra-arterial nodules, says Dr. Knox, differ from the ordinary tendinous or milky patches often observed upon the epicardium, especially over the right ventricle, in their multiplicity, their smaller size, and their distribution over the coronary arteries, to which they evidently bear some definite relationship. In gross appearance they resemble much more closely the nodular affection of the arteries first described by Kussmaul and Maier in 1866 under the name "periarteritis nodosa." This resemblance, however, is only superficial and does not pertain to the histological structure.

The author briefly reviews accounts of cases observed by Kussmaul and Maier, Chvostek and Weichselbaum, Heubner, Meyer, Fletcher, and von Kahlén. From this brief review the author remarks that there are several reported instances of an affection of the smaller arteries, characterized macroscopically by circumscribed whitish nodules distributed pretty generally through the body, except in the central nervous system, and microscopically by hypertrophy of both internal (except in the case of Kussmaul and Maier) and adventitial coats, with weakening and, in places, with rupture of the elastic coat. There was sometimes dilatation of the vessel, but usually the lumen was narrowed. The lesions in these cases were accompanied by clinical symptoms having much in common. The onset was sudden and marked by muscular pain, weakness, intermittent fever, and gastro-intestinal disturbances. There were occasionally also subsequent paralysis, anaemia, and nephritis. The course of the disease was progressively fatal, death resulting in all cases in from seven to twelve weeks.

Three suggestions have been made as to the etiology. Chvostek and Weichselbaum, reasoning from the close resemblance to arterial changes of known syphilitic origin, consider lues to be the cause of the lesions. Meyer and Eppinger think that the primary change is a weakening of the elastic membrane, while Fletcher and von Kahlén are of the opinion that the proliferation of the intima is the first step, and that this is brought about by the direct action of bacteria or of toxins.

The gross appearance of the nodules on the surface of the hearts in Dr. Knox's cases agrees closely, he says, with that of the arterial thickenings scattered generally through the body in the cases of so-called periarteritis nodosa. It is shown in Fig. 1.



FIG. 1

The appearances observed under the microscope differed somewhat in different cases, although the main lesion was constant. In four cases the following conditions were observed in cross sections including the coronary arteries with the nodules upon their adventitial surfaces: The intima of the arteries in the majority of sections examined showed little alteration. In several specimens there could be made out a marked increase in the intimal layer, either as a single mass bulging into the lumen, representing perhaps an organized mural thrombus, or as several smaller, more diffuse protrusions consisting of fusiform and branched cells with some intercellular substance. In the last case examined the intimal changes were much more pronounced, being most marked in situations corresponding to the nodes. The

hyaline metamorphosis were apparent. The changes in the adventitia proper were slight and inconstant. Only occasionally was there any hypertrophy.

The nodular formations lay upon the vessels within the epicardium, being seated primarily in the layer of connective tissue between the endothelial covering and the delicate layer of elastic fibres which rests upon the main layer of loose vascular connective tissue containing the epicardial fat. Their situation corresponded, therefore, to that of milky patches as determined by Ribbert.* In their immediate neighborhood were found the usual loose adipose and connective tissues, vessels, and nerves. But the nodules differed from the normal connective tissue, being at once distinguished from this by their dense and fibrous, often sclerotic, appearance.

The appearance on cross section was as though a compact mass of firm connective tissue, convex on its inner surface, were set upon the artery in the loose epicardial tissue. The lateral edges of the thickening slanted gradually upward to the surface and were continuous there with the epicardium. Scattered through the firm mass are a few fusiform connective-tissue cells. At the base of the area and at the sides there were often groups of lymphocytes and sometimes a small number of polymorphonuclear leucocytes (Figs. 2 and 4). The firm tissue had pushed up beyond the level of the rest of the epicardium and formed the opaque nodule seen in the gross specimen. The endothelium and occasionally some subjacent tissue covered the prominence and were continuous with the serosa over the rest of the heart. Beneath the nodules the layer of epicardial elastic tissue could usually be demonstrated, but the subjacent loose connective and adipose tissues were more or less atrophied.

The size of the fibrous thickening varied within wide limits, both in depth and in lateral extension. It might form a comparatively narrow band which was not raised above the surface of the epicardium; or, again, it might appear as a high, irregular, almost pediculated projection rising from a compact base above the vessel (Fig. 5).

The nodule might not only cover the outer surface of the vessel but might extend a considerable distance in the loose cellular tissue on each side (Figs. 4 and 5); or, on the other hand, there might be an oval patch over only a portion of an artery, the remaining circumadventitial covering being quite normal (Fig. 2).

The early stages of the process leading to the supra-arterial nodules presented a tissue richer in cells, both fibroblasts and lymphoid cells, situated superficially to the vessel and on its epicardial side. As the nodule became older, the more homogeneous and less cellular became its structure; the nuclei were fewer and the focus was more sharply differentiated from the surrounding tissue. In no instance was any tendency to a similar fibrous formation noticed on the side of the affected vessel next to the heart muscle, and no similar alterations

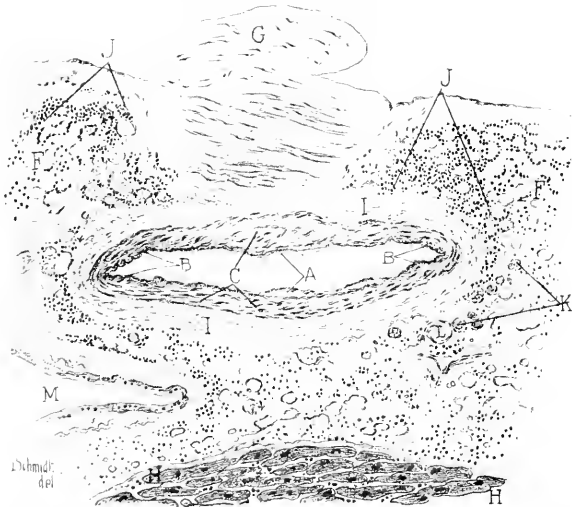


FIG. 2.—Transverse section of small artery in epicardium, surrounded by a fibroid nodule. The fibrous thickening is over about one half the width of the vessel. Hematoxylin and eosin staining. *A*, Intima. *B*, Inner elastic coat, wavy lines showing only at the sharper turns of the vessel wall. *C*, Media, slight swelling and degeneration (reduction in the number of nuclei beneath the nodule). *I*, Adventitial coat unaltered. *E*, Normal epicardium. *G*, Supra-arterial fibroid nodule projecting above the surface of the epicardium and extending to the adventitial membrane. *J*, Accumulation of small round cells in the epicardium at the sides of the node. *K*, Nerves in cross section. *L*, Capillaries. *M*, Portion of a vein evidently not associated with the fibrous nodule. *H*, Heart muscle.

entire internal coat was thickened, but the increase was especially marked in the myocardial hemispherical segment of the artery. In this situation it was of fully six times its normal thickness and the muscular tunica was somewhat diminished and degenerated. The increase in the thickness of the intima on the epicardial side was relatively slight, although the muscle in that region was degenerated and attenuated to a greater degree than on the opposite side of the vessel.

The muscular coat (media) was in the main, except in one instance, unchanged, so far as could be determined, in the sections stained by hematoxylin and eosin. Occasionally there was an apparent degeneration of muscular fibres as shown in a reduction in number of muscle cell nuclei, and there was exceptionally an infiltration with small round cells. In one case the media showed much more pronounced pathological changes, in that the tunica was reduced in thickness and areas of

* Virchow's *Archiv*, cxlvii, 1897, 211.

were seen about the arteries in the substance of the myocardium.

We have, then, in these cases, says Dr. Knox, nodules on the surface of the heart macroscopically resembling those described by Kussmaul and Maier, but totally dissimilar in their minute structure and relations: for the specimens stained in hæmatoxylin and eosin failed completely to show any constant degeneration or proliferation of the arterial walls, such as is present in periarteritis nodosa. The uniform relationship to arteries, however, suggested that there was probably some alteration in the vessel which was at least associated with the nodule. Hence a representative number of the sections were stained for elastic tissue by the fuchsin method of Manchot and by the method of Weigert.

The author gives the results of these stainings, and

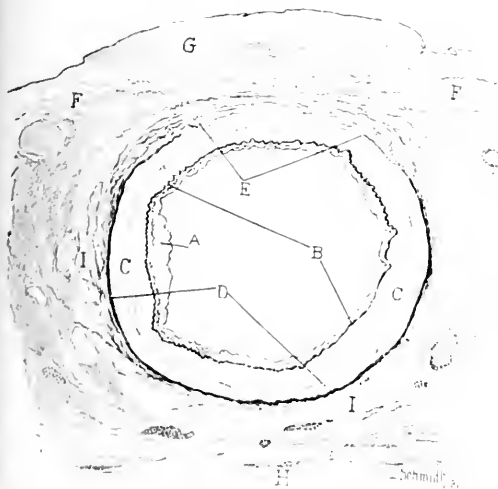


Fig. 4. Specimen stained in fuchsin, Manchot's method. A, Intima. B, Inner elastic coat unaltered, no break or weakness beneath the nodule. C, Media. D, Outer elastic membrane between the media and the adventitial layer. This elastic membrane is thick and firm, and evidently supplying the chief support and giving the elasticity to the vessel wall. The membrane is intact, except at E, where beneath the nodule there is a marked fraying out and disappearance of the elastic fibres, with a consequent diminution in the strength of the arterial wall. E, F, G, H, I as in Fig. 2.

says that the microscopical observations indicate a relationship between the fibroid nodules and the demonstrated weakening in that part of the arterial wall immediately beneath the nodule.

In considering the ætiology of this certainly distinct lesion, says Dr. Knox, one must recall the disease, with which it may be associated. There was a distinct history of syphilis in one case; in three it was denied, with there is reason to be quite sure that there was no venereal infection in the fifth case. The nature of the histological changes does not correspond to that of a specific infection. The arterial alterations produced by the disease consist in an endarteritis associated usually with a periarteritis, or the direct inclusion of the vessel in a surrounding gummatous material. In the sections examined the arterial walls were unaffected, except in the nodules already described, and in no instance were any changes seen in the adjacent tissue.

So far as the gross appearances go, the nodules could

possibly be mistaken for tubercles. One of the subjects had suffered from a general tuberculous peritonitis for which laparotomy had been performed. In the other cases there was no evidence whatever, clinical or anatomical, of infection with the tubercle bacillus, and there was not the slightest sign of any tuberculous structure in any of the preparations.

Blood infection from either bacteria or their toxins was the cause suggested for periarteritis nodosa by Fletcher and von Kahlen. They based their hypothesis upon the primary proliferation of the intima which they attributed to the direct action of toxic substances in the circulation. This cellular increase in the intima was absent in most of the sections in Dr. Knox's cases, although it was present in one case. Moreover, cultures from the heart's blood were negative in two instances, while *Staphylococcus pyogenes albus* alone was found once, as was also in one case *Staphylococcus pyogenes aureus*. In the fifth case blood cultures taken during life remained sterile. It would be quite impossible to imagine that the nodules could be due to poisonous agents carried in the blood stream and producing this fibrous thickening on but one side of the artery, while they so rarely affect a vein and do not injure further the intermediate arterial coats. We may, therefore, doubtless exclude syphilis, tuberculosis, and other infections as essential ætiological factors in the production of these supra-arterial nodules.

The evidence seems to the author strongly to support the view that the primary, underlying cause is to be found in a weakening of the arterial wall, due usually to defects in one or both of the principal elastic lamellæ of the artery, most frequently of the elastica externa. All the cases were in men between nineteen and fifty-four years of age, accustomed, with one exception, to hard work, irregular methods of life, indifferent nourishment, and various quantities of alcoholic beverages. The heart was hypertrophied in four cases; in one there were valvular lesions, in two there was arteriosclerosis, in four there was nephritis, in four there was oedema, and in a single case aneurysm existed. These conditions indicate that during life there must have been irregularities in the force of the blood pressure, influenced further, doubtless, by the ingestion of large quantities of food. The duration of the final illness varied from eight weeks to two years. So far as known, no symptoms are attributable to the epicardial nodules.

As a probable explanation, then, of the origin of these fibroid nodules it is suggested that there is a weakening of the arterial coats, mainly of the outer elastic coat, on the side toward the nodule. While this defect may be congenital, it is more probable that it is acquired through poor nutrition combined with sudden alterations in blood pressure from the causes already indicated. This loss of elasticity, it may be supposed, is compensated for by a fibroid proliferation situated not in the vessel wall, but beyond it in the connective tissue.

For such an explanation an example is to be found in the views now generally held of the formation of aneurysms, first advanced by Rokitansky and later supported, with certain minor exceptions, by Fournier, P. Meyer, Manchot, Thoma, and others. The authorities consider the primary change to be a narrowing of the media, especially of the inner elastic coat and fibres, with subsequent bulging out of the vessel wall. When the weakening takes place in the outer elastic coat, the danger occurs in the intima and the danger of the danger of aneurysm is lessened by the narrowing of the arterial

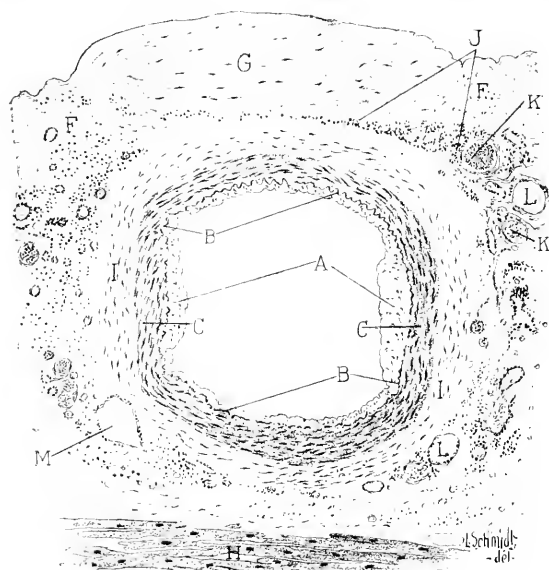


FIG. 4.—Same specimen as in Fig. 3, stained by hematoxylin and eosin. A, Intima, with areas of proliferation probably not associated with the fibrous nodule. B, Inner elastic coat. C, Media apparently unchanged. D, Adventitial coat unaltered. E, Normal epicardium. F, Fibroid nodule projecting but slightly above the surface of the epicardium and extending to the adventitial coat beneath. G, Groups of small round cells at the side and beneath fibrous nodule. H, L, M, N as in Fig. 2.

wall. Tears in the elastic lamellae are not uncommon, and may occur without the formation of aneurysm. The high pressure in the coronary arteries would seem to render these vessels particularly exposed to such injuries when the nutrition of their walls is impaired. Of special interest in the author's cases is the demonstration of more frequent and pronounced defects in the outer elastic lamella than in the internal one.

In no case was there an increase in the surrounding connective tissue corresponding to the inner, or myocardial, side of the artery, and it is to be conjectured that here the heart muscle affords sufficient support to prevent stretching of the vessel wall with such ruptures of the elastic lamellae as were observed on this side. Each pulsation must produce expansion of the artery, which is most marked at the point of least resistance, i.e., at the outer, or epicardial, surface. Excessive or irregular expansion can easily be thought of as injuring

more or less the elastic coat. In such cases there follows a still greater protrusion outward of the vessel wall with each pulsation. The significant localization of the defects in the outer elastic lamellae upon the epicardial side of the arteries indicates the greater exposure of the artery upon this side to injury, and this may be due to the lack of the support which is afforded to the myocardial side of the artery by the surrounding tissues. The firm resistance offered to the expansion of the vessel on the inner side by the ventricular wall is an important factor in favoring increased bulging in the free semicircumference. The absence of this counter-support probably accounts for the fact that similar nodules are rare upon the auricles.

Dr. Knox's conclusions are as follows:

1. Fibroid nodules seated in the epicardium directly over branches of the coronary arteries of the heart are not uncommon. They may be present in large numbers and are found most frequently upon the surface of the ventricles, but may occur over the auricles and even on the outer surface of the ascending aorta. They are rarely observed over the coronary veins.

2. While often resembling in gross and superficial appearances the nodules described by various writers under the name of "periarteritis nodosa," they differ from these in essential respects. They are seated outside of the adventitial coat and lie within the epicardium. They are composed of dense, fibrous, sclerotic tissue, poor in cells. In earlier stages of their formation they are richer in cells, both fibroblasts and lymphoid cells.



FIG. 5.—Transverse section of larger artery surmounted by a pronounced fibrous thickening, somewhat pedunculated and projecting abruptly from the surface. Same staining as in Fig. 3. A, Intima. B, Inner elastic coat, very thin, unaltered. C, Media. D, Outer elastic coat, compact only for a small portion of the circumference on the myocardial side. From this point on each side the fibres may be seen to separate into a network and to become diminished in number until at I they can not be demonstrated.

3. These supra-arterial nodules bear no definite relation to endarteritis, although they may be associated with this condition.

4. There were found with great regularity in the arterial wall immediately beneath the nodule, changes, which indicated a weakening of the wall in this situation. In some instances the muscular coat was thinned and degenerated, but the most common and important change was reduction and often disappearance of the elastic lamellæ and fibres, the outer elastic lamella being the one most frequently and intensely affected. These lesions were often limited to the segment of the arterial wall adjacent to the epicardium, the inner or myocardial segment of the same artery being free from similar alterations, or presenting them only in a slight degree. It is suggested that the absence on the outer or epicardial segment of the firm support afforded to the artery on the inner or myocardial aspect by the surrounding tissues renders the former more liable to damage to the elastic tissue resulting from irregularities and increase of blood pressure associated perhaps with defects of nutrition.

5. In consequence of the weakening in the arterial wall the artery would tend to bulge at the affected spot toward the epicardium were this tendency not restrained. The formation of the dense supra-arterial nodule of fibrous tissue over the weakened area holds this tendency in check, and may therefore be regarded as an adaptive or compensatory change.

The question as to the immediate exciting cause of the new growth of tissue offers the same difficulties as that pertaining in general to similar growths of connective tissue. Some would doubtless attribute it to direct stimulation from the pressure and shock of the impinging artery, others to defects in the tissue, and still others to a disturbance of the neighborhood relations of the part. It is not deemed necessary to enter into a discussion of these various hypotheses.

Dr. Knox concludes with brief histories of the cases in which his observations were made. We are indebted to him for permission to publish this abstract of his article and to the *Journal of Experimental Medicine* for the loan of the electrotypes of the illustrations.

Splenic Extract in Insanity.—According to the *Alienist and Neurologist* for April, Dr. Kerr and Dr. Bois, of Harwood, England, at the last meeting of the British Medical Association, reported twenty-two cases of insanity treated with splenic extract. Recovery occurred in eight and physical improvement in seventeen. The most tractable cases were those of stuporous insanity during adolescence.

Insanity Defined on the Basis of Disease.—Dr. C. H. Hughes (*Alienist and Neurologist*, April), in a paper presented to the *American Medical Psychological Association*, says that since modern research, assisted by the microscope, the test tube, and the crucible, has proved to us that there can be no expression of mental derangement unless there is a substratum of cortex disease, either in the neurone, in the enveloping membranes of the brain, in the nourishing blood supply, in the behavior of the vasomotor mechanism, or remotely in any of the organs of the body affecting the brain, we are to cause these conditions, we need never be at sea before any court or any jurist in defining insanity as a disease, one primarily or secondarily involving the brain, of the individual so as to produce in him a change in the natural habits of thought, feeling, or action. A change of

his normal, natural mental expression by which, and by reason of the disease underlying all, he is placed out of harmony with his surroundings, with his natural self, or with his normal family type of mind."

A Death following a Sty.—H. Guth (*Progr. medizinische Wochenschrift*, No. 3, 1898; *St. Paul Medical Journal*, May, 1899) says that a woman was brought into the clinic with both lids greatly swollen, the conjunctiva chemotic, both eyeballs protruding, high fever, Cheyne-Stokes breathing, tonic and clonic spasms. Ophthalmoscopic examination showed septic retinitis; death followed; post-mortem showed that there was suppurative meningitis which had proceeded through infection from a hordeolum; the suppuration had infiltrated the orbital tissues and penetrated through the right cavernous sinus to the meninges.

Book Notices.

Die gestielten Anhängel des Ligamentum Latum. Von Dozent Dr. EMIL ROSSA, in Graz. Mit zwei lithogr. Tafeln. Berlin: S. Karger, 1899. Pp. 51.

THE author, finding the subject of the pedunculated cysts of the broad ligament but little understood, has endeavored to clear up their origin and nature. This he has been able to do only partially. Some arise from remnants of the paroophoron, others from cystic degeneration of the fimbriae of the tube, others from remnants of the fallopian canal between the abdominal cavity and the primitive kidneys. A complete review of the literature of the subject is given.

La Pulsation du pied. Essai sur un nouveau signe clinique. Par le Docteur SILVIO TARRI, Directeur du laboratoire de l'hôpital Rivadavia, etc. Buenos Aires: J. Pensier, 1898. Pp. 3 to 44.

IT is a well-known fact that when the lower limbs are crossed there is a vibration of the upper, free limb exactly synchronous with the cardiac pulsation. This vibration the author thinks is due, not to the amplification of the beat of the popliteal artery, but to the systole and diastole of the smaller arterioles and the capillaries of the limb. He finds certain differences in the form of the curves from those obtained at the radial of the same patient, and maintains that an early diagnosis of arteriosclerosis can be made from the tracing. To the casual observer the curves obtained differ in no way from those from the radial artery in the same case, except that the great weight and momentum of the leg acting as a lever prevent the registration of the finer shades of the vascular pressure obtainable by the use of a very light and short lever, such as is used in the ordinary sphygmograph.

Notes on Surgery for Nurses. By JOSEPH B. HILL, M.D., F.R.C.S. Edin., Consultant Surgeon to the Royal Infirmary and to the Royal Edinburgh Hospital for Sick Children. Fifth Edition, thoroughly revised. Edinburgh: Oliver & Boyd, London: Simpkin, Marshall, Hamilton, Keir & Co., 1899. Pp. 9 to 194. [Price, 2s. 6d.]

THE fifth edition of this very excellent little volume on surgical nursing has been thoroughly revised and

brought up to date. A new and useful appendix has been added on the relation of the nurse to the profession and the public which can not help being of value to those for whom it is intended.

Golden Rules of Surgical Practice. By E. HURRY FENWICK, F. R. C. S., Surgeon to and Lecturer on Clinical Surgery at the London Hospital, etc. Golden Rules Series. No. 1. Fifth Edition, revised and enlarged. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1899. Pp. vi-10 to 71. [Price, 1s.]

THE writing of this little guide was suggested by an observation made by the author concerning the vast learning displayed by his surgical internes in all questions of recent theories of disease and their equally vast ignorance of the little, practical, everyday facts so necessary in the care of patients. For the purpose of instructing beginners in the practical rudiments of surgery this volume will prove excellent.

Golden Rules of Obstetric Practice. By W. E. FOTHERGILL, M. A., B. Sc., M. D., Author of *A Manual of Midwifery*, etc. Golden Rules Series. No. 3. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1899. Pp. 4 to 71. [Price, 1s.]

AN excellent collection of short sensible rules to be observed during attendance in a case of obstetrics.

Golden Rules of Gynecology. By S. JERVOIS AARONS, M. D., Registrar to the Hospital for Women, etc. Golden Rules Series. No. 2. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1899. Pp. 11 to 63. [Price, 1s.]

THE medical student will find many useful hints on practical gynecology in this small volume.

BOOKS, ETC., RECEIVED.

The Diseases of the Nervous System. A Text-book for Physicians and Students. By Dr. Ludwig Hirt, Professor at the University of Breslau. Translated, with Permission of the Author, by August Hoch, M. D., formerly Assistant Physician to the Johns Hopkins Hospital, etc., assisted by Frank R. Smith, A. M. (Cantab.), M. D., Instructor in Medicine in the Johns Hopkins University. With an Introduction by William Osler, M. D., F. R. C. P., F. R. S., Professor of Medicine in the Johns Hopkins University, etc. With One Hundred and Eighty-one Illustrations. New York: D. Appleton and Company, 1899. Pp. xvi-715. [Price, \$5.]

Treatise on Human Physiology. For the Use of Students and Practitioners of Medicine. By Henry C. Chapman, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in Jefferson Medical College, Philadelphia, etc. Second Edition. Illustrated with Five Hundred and Ninety-five Engravings. Philadelphia: Lea Brothers & Co., 1899. Pp. 9 to 924. [Price, \$4.25.]

Laboratory Work in Bacteriology. By Frederick G. Noy, Sc. D., M. D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. Second Edition, revised and enlarged, with Frontispiece and Seventy-six Illustrations. Ann Arbor, Michigan: George Wahr, 1899. Pp. 3 to 563.

Pericardial Diseases, Illustrated Clinically. By Thomas E. Satterthwaite, M. D. [Reprinted from the *Medical Times*.]

The Shape and Position of the Stomach. By Henry Wald Bettman, M. D., of Cincinnati. [Reprinted from the *Philadelphia Monthly Medical Journal*.]

Cupulence and the Fatty Heart. By Thomas E. Satterthwaite, M. D. [Reprinted from the *Post-graduate*.]

Miscellany.

The Lenval Prize.—This prize, which has been founded by Baron Léon de Lenval, of Nice, will be awarded at the International Otological Congress to be held in London, from August 8 to 11, 1899. The regulations for its award, which were passed at the Fifth International Otological Congress, held in Florence in 1895, are as follows—viz.: 1. In connection with the International Congresses of Otolgy, the sum of three thousand francs has been given to found a prize, bearing the name of "the Lenval prize." 2. The interest of this sum, which has accumulated between one International Otological Congress and the next, shall be awarded to the author of the most marked progress bearing on the practical treatment of affections of hearing during that time or to the inventor of any new apparatus which is readily portable and improves considerably the hearing power of deaf persons. 3. The sum of three thousand francs will be deposited in a public bank in the hands of the president of the jury. 4. The International Otological Congress will elect a jury each time, consisting of seven members. The jury will pronounce its decision at the closing meeting of each congress. The members of the jury, as at present constituted, are Professor Politzer (Vienna), Dr. Benni (Warsaw), Dr. Gellé (Paris), Professor Pritchard (London), Professor St. John Roosa (New York), Professor Kirchner (Würzburg), and Professor Grazi (Florence). All persons desirous of competing for the prize are requested to communicate without delay with Mr. E. Cresswell Baber, honorary secretary-general, 46 Brunswick Square, Brighton, England, stating the facts on which their claim is based.

Cancer Hospitals in New York.—Apropos of a recent newspaper discussion, the following declaration of policy has been issued by the New York Skin and Cancer Hospital:

"Whereas, Public appeals are being made for funds to establish and support a 'Home for Cancer Incurables,' and some of these appeals are in substance and form such as possibly to create a wrong impression regarding the purposes and works of our own institution; and

"Whereas, It is expedient that we should leave no uncertainty in the public mind regarding our work and the tests by which alone it may fairly be judged; now, therefore, it is

"Resolved, That we, the board of governors of the New York Skin and Cancer Hospital, in regular meeting, adopt the following propositions as a minute declaration of the institution's policy in regard to so-called incurable cases of cancer:

"We are a free hospital for cancer, as well as for skin diseases. Admittance to clinics or general wards is in no case conditioned solely on ability to pay. Nor is a patient ever discharged for mere inability to pay.

The only payment that is ever requested is a small sum for board. A ward patient who pays a dollar a day is officially reported as 'full pay.' Only a small proportion of our patients has at any time belonged to this class. The management has in mind its obvious duty to its patrons, its beneficiaries, the medical profession, and society at large in pursuing this course. By far the greater part of our patients pay little or nothing, and the board recognizes that this must continue to be true.

"We are a hospital, and, as such, exist primarily to afford facilities for the scientific treatment of specific diseases, and only secondarily (if at all) to receive sufferers who require tender care but are presumably or demonstrably not susceptible of cure or betterment.

"Throughout our history we have recognized that it is a part of our privilege and duty to pursue the scientific study of cancer with a view to removing the present dead-line of incurability. It is therefore neither our policy nor our practice to reject all inoperable cases—in fact, we have nearly always had some such among our absolutely free patients.

"We maintain a staff of recognized specialists in medicine and surgery, who are wholly unpaid. If we permitted the hospital to become a mere home for incurables, we could not retain the services of these physicians. Their presence would not be needed and their observations would not benefit science or society. So long, therefore, as our endowment and contributions are inadequate to maintain the much-needed and acknowledgedly more valuable hospital service, we must continue to limit our ward service primarily to curable and improvable cases.

"We recognize the need of some proper charitable accommodation for indigent sufferers who are beyond hospital treatment. We would welcome the wise establishment of such an institution on a thoroughly liberal basis. For years we have been appealing generally for money in behalf of cancer sufferers. Friends have to some extent come forward to perfect and enlarge our hospital plant; and we are still laboring at this, which we regard as our first duty. We have not yet been placed in a financial position justifying our undertaking the supplemental work of exclusively incurable wards. If charitable people wish to intrust this particular work to others we do not complain. We only remind them that no amount or kind of provision for incurables can remove or even diminish the pressing necessity for strictly hospital facilities. Indeed, the very fact of the demand for a home is the best proof of the need for larger and better hospital service to check if possible the increasing ravages of the disease.

[Signed.]

"FLETON McMAHON,

"J. E. JANVIER, M. D.,

"Committee.

"New York, April 11, 1899.

The Medical Society of the State of North Carolina will hold its forty-sixth annual meeting in Asheville, Tuesday, Wednesday, Thursday, and Friday, May 30th and 31st and June 1st and 2d, under the presidency of Dr. L. J. Pratt, of Lattimore. Inquiries concerning matters pertaining to local arrangements should be addressed to Dr. M. H. Fletcher, Asheville.

The First Meeting of Rectal Specialists is to be held in Columbus on Tuesday, Wednesday, Thursday and Friday, June 6th, 7th, 8th, and 9th. The program is as follows: The Importance of giving Rectal Disease Special Study, by Dr. Joseph M. Mathews, of Louisville;

Pruritus Ani, by Dr. James P. Tuttle, of New York; The Surgical Treatment of Non-malignant Stricture of the Rectum, by Dr. Joseph B. Bacon, of Chicago; A Modification of Whitehead's Operation for Hemorrhoids, by Dr. Samuel T. Earle, Jr., of Baltimore; The Proctoscope as a Factor in the Diagnosis and Treatment of Simple Ulceration of the Rectum, by Dr. Leon Straus, of St. Louis; A Consideration of the Various Forms of Ulceration of the Rectum, by Dr. Lewis H. Adler, Jr., of Philadelphia; Rectal Carcinoma—Excision and Subsequent Colotomy, by Dr. B. Merrill Ricketts, of Cincinnati; The Limitations of the Kraske Operation, by Dr. Charles C. Allison, of Omaha; The Act of Defecation, by Dr. Thomas Charles Martin, of Cleveland; Constipation considered from the Standpoint of the Proctologist, by Dr. A. Bennett Cooke, of Nashville; a paper and exhibition of new instruments, by Dr. S. G. Gant, of Kansas City; and Rectal Adenomata, by Dr. William M. Beach, of Pittsburgh.

The Late Dr. Hunter.—The *Lancet* for April 22d contains a letter from Major Greenwood, M. D. Brunsell, LL.B. London, barrister at law, with reference to Dr. Hunter, who was prosecuted some time back for styling himself "physician," when his only English diploma was the license of the Society of Apothecaries. Dr. Hunter, it appears, held the M. D. degree from Jefferson College, Philadelphia, the authenticity of which was verified by Dr. Greenwood by communication with the dean of that institution. Dr. Greenwood, who represents, we think, fully the accord of the English medical profession on that subject, says that the fact that a registered medical practitioner with such a degree should be refused the honorary title of "M. D." in England seems to him monstrous, and he thinks that his opinion would be shared by any medical graduate of an English university who, being resident in Philadelphia after acquiring the State license to practise there, was similarly refused the same honorary distinction. The holder of an M. D. degree of any recognized university, he says, unless that university withdraws the distinction, must continue to be a doctor of medicine independently of all political considerations, wherever he resides. This has nothing whatever to do with the right to practise medicine, which is quite another matter.

The New York Hospital Report. The report for the year 1898, recently issued, deals rather more largely with matters pertaining to the history of the hospital than has usually been the case. In particular, there is an interesting history of the library, by Dr. A. Brayton Ball. It is embellished with portraits of Dr. Samuel Bard, Dr. John Jones, Dr. Richard Bayley, Dr. James Tillary, Dr. Wright Post, Dr. J. R. B. Rodgers, Dr. Samuel Borrowe, Dr. Valentine Seaman, Dr. Elum H. Smith, Dr. Samuel L. Mitchell, Dr. David Hosack, Dr. William Humesley, Dr. Edward Miller, Dr. Archibald Bruce, Dr. Valentine Mott, Dr. Alexander H. Stevens, Dr. John Watts, Dr. John Nelson, Dr. Thomas Cock, Dr. John C. Chesman, Dr. J. Kearney Rogers, Dr. Samuel W. Moore, Dr. Stephen Brown, Dr. Francis F. Johnston, Dr. James Macdonald, Dr. Joseph M. Smith, Dr. Guy C. Bayly, Dr. John B. Beck, Dr. Edward Delafield, Dr. Alfred C. Post, Dr. John G. Adams, Dr. Gordon Rock, Dr. Benjamin Ogden, Dr. William Wilson, Dr. John W. W., Dr. John A. Swett, Dr. John H. Griscom, Dr. P. H. Park, Dr. Henry D. Bulkley, Dr. Charles H. Nelson, Dr. Ebeneser M. Hallsted, Dr. Thomas M. Marks, Dr. D. Tilden Brown, Dr.

William H. Van Buren, Dr. John T. Metcalf, Dr. Thomas F. Cock, Dr. Willard Parker, Dr. George A. Peters, Dr. Thomas B. Dash, Dr. William H. Draper, Dr. Henry B. Sands, Dr. Charles M. Allin, Dr. Gouverneur M. Smith, Dr. Charles E. Hackley, Dr. James W. McLane, Dr. Ernst Kracowizer, Dr. Woolsey Johnson, Dr. Edward L. Partridge, and Dr. W. Gilman Thompson, who served as medical officers in the past, and Dr. Robert F. Weir, Dr. William T. Bull, Dr. George L. Peabody, Dr. A. Brayton Ball, Dr. Lewis A. Stimson, Dr. Samuel B. Lyon, Dr. Frank Hartley, Dr. Francis W. Murray, Dr. Henry P. Loomis, Dr. Samuel W. Lambert, and Dr. Lewis A. Conner, who are still in the service of the institution.

The Journey to Columbus.—The committee on transportation of the New York County Medical Association is arranging for rates, train service, etc., for the Columbus meeting of the American Medical Association, to be held on June 6th, 7th, 8th, and 9th. Those intending to go, and desiring to take advantage of such arrangements as may be made, will kindly address, as soon as possible, Dr. Parker Syms, chairman of the committee, No. 50 West Forty-seventh Street.

The Determination of the Placental Site by Palpation.—Dr. C. F. Close, of Chicago, has sent us an account of the method of ascertaining the situation of the placenta taught and practised by Professor Leopold, of Dresden. In nearly all cases, says Dr. Close, the Fallopian tubes are palpable. If they converge from above downward or are parallel, the placenta is seated anteriorly; if they diverge from above downward, the situation of the placenta is posterior. This is of special importance, Dr. Close remarks, when the question of inducing premature labor by introducing a bougie between the fetal membranes and the uterine wall or that of performing the Cesarean operation arises, in order to avoid the placental site. Dr. Close gives the statistics of placental implantation as follows: Posteriorly, fifty per cent.; anteriorly, forty per cent.; to the right, six per cent.; to the left, four per cent.

The Revision of the Pharmacopœia.—Dr. H. C. Wood, of Philadelphia, has issued the following proclamation, dated May 1st:

"To all whom it may concern: In accordance with instructions given by resolutions passed at the National Convention for Revision of the Pharmacopœia of the United States of America, held in Washington, A. D. 1890, I herewith give notice that a General Convention for the Revision of the Pharmacopœia of the United States of America will be held in the city of Washington, D. C., beginning on the first Wednesday in May, 1900. It is requested that the several bodies represented in the conventions of 1889 and 1890, and also such other incorporated State medical and pharmaceutical associations and incorporated colleges of medicine and pharmacy as shall have been in continuous operation for at least five years immediately preceding this notice, shall each elect delegates, not exceeding three in number; and that the surgeon-general of the army, the surgeon-general of the navy, and the surgeon-general of the Marine-Hospital Service shall appoint, each, not exceeding three medical officers to attend the aforesaid convention.

"It is desired that the several medical and pharmaceutical bodies and the medical departments of the army, navy, and Marine-Hospital Service shall transmit to me the names and residences of their respective delegates,

so soon as said delegates shall have been appointed, so that a list of the delegates to the convention may be published in accordance with the resolutions passed at the 1890 convention for the revision of the Pharmacopœia, in the newspapers and medical journals in the month of March, 1900.

"Finally, it is further requested that the several medical and pharmaceutical bodies concerned, as well as the medical departments of the army, navy, and Marine-Hospital Service, shall submit the present pharmacopœia to a careful revision, and that their delegates shall transmit the result of their labors to Dr. Frederick A. Castle, 51 West Fifty-eighth Street, New York city, secretary of the committee of revision and publication of the United States Pharmacopœia, at least three months before May 2, 1900, the date fixed for the meeting of the convention."

The American Laryngological Association will hold its twentieth annual meeting in Chicago on Monday, Tuesday, and Wednesday, May 22d, 23d, and 24th, under the presidency of Dr. W. E. Casselberry, of Chicago. Physicians who are interested in laryngology are invited to attend.

The Nebraska State Medical Society held its thirty-first annual meeting in Lincoln on Tuesday, Wednesday, and Thursday, May 9th, 10th, and 11th, under the presidency of Dr. A. R. Mitchell, of Lincoln. After a general meeting for matters of business, the professional proceedings were conducted in sections as follows: Laryngology, Dr. S. E. Cook, of Lincoln, chairman; Nervous and Mental Diseases, Dr. J. L. Greene, of University Place, chairman; Public Hygiene and Medical Legislation, Dr. C. C. Gafford, of Wymore, chairman; Practice of Medicine, Dr. Claude Watson, of Nebraska City, chairman; Surgery, Dr. Byron B. Davis, of Omaha, chairman; Ophthalmology and Otology, Dr. D. C. Bryant, of Omaha, chairman; Anatomy and Physiology, Dr. J. B. Hlungate, of Weeping Water, chairman; Obstetrics and Gynecology, Dr. Robert McConaughy, of York, chairman; Materia Medica and Therapeutics, Dr. F. W. Lester, of David City, chairman; and Histology and Pathology, Dr. W. R. Lavendar, of Omaha, chairman.

Congenital Extrusion of the Stomach.—At the recent meeting of the South Carolina State Medical Association Dr. D. M. Crosson, of Leesville, presented a fetus, which he judged to be of about six months' development, showing an aperture in the upper part of the abdominal wall through which the stomach protruded. In addition, there was no anus. The child had breathed for a few moments after its birth.

Anomalous Ducts of Exit from the Parotid Gland.—At the same meeting Dr. Crosson reported the cases of four out of a family of seven children who had congenital openings in front of the external ear from which a constant discharge issued. In three of the children the opening existed in front of each ear, and in the fourth it was on the left side only. Dr. Crosson had satisfied himself by probing and other methods of examination that these anomalous passages were ducts leading from the parotid gland. When these ducts became obstructed, as they occasionally did, suppuration followed. Two of these children's cousins, children of the mother's brother, also had like malformations, so that six cases in all were reported.

Original Communications.

THE SIGNIFICANCE OF ABSENCE OF NUCLEATED RED CORPUSCLES IN THE BLOOD IN CASES OF GRAVE ANÆMIA.

By JOHN S. BILLINGS, JR., M. D.,

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IN attempting to form a prognosis in cases of grave anæmia several things must be taken into consideration. Such anæmias are, as a rule, secondary to severe or persistent hæmorrhage from various causes, or to malnutrition, such as occurs in cases of complete atrophy of the gastric mucous membrane, carcinoma of the stomach, etc. It is probable that in time the term primary pernicious anæmia will be limited to an extremely small group of cases for which no cause other than alterations in the blood-making organs (marrow, spleen, etc.) can be found. At the present day, however, many cases of progressive and fatal anæmia do occur for which no primary cause can be assigned, and in which the steadily increasing destruction of the red corpuscles is supposed by most authorities to be due to disease of the blood-making organs or to some agency originating within the circulating blood itself.

In extra-uterine life the red corpuscles are probably formed in the marrow of the bones. This is in health their only source, but in disease the spleen is supposed to again take up the making of red corpuscles—a function it normally loses at or before birth. But under all circumstances, the large majority of the red corpuscles are formed in the marrow. Certain nucleated marrow cells, called for convenience “mother cells,” divide and produce other nucleated cells which take up or form hæmoglobin, extrude their nuclei, and pass into the circulating blood as normal red corpuscles. In health the nucleus is always extruded while the future red corpuscle is still within the bone marrow. When abnormal destruction or loss of red corpuscles occurs in the blood, the formation of new corpuscles in the marrow is correspondingly increased. Where such destruction or loss is not too great, the marrow is equal to the task and keeps the blood supplied with normal non-nucleated red corpuscles. But when the destruction or loss is too great, the blood-making powers of the marrow become insufficient, and nucleated red corpuscles appear in the circulating blood. This signifies that the marrow is producing red corpuscles so rapidly that there is not sufficient time for all of them to extrude their nuclei while still within the marrow. The bone marrow in health contains considerable fat and is of a yellowish color. Where it is called upon to produce large numbers of red corpuscles, as in grave anæmia, the fat disap-

pears, the marrow becomes reddish, and is said to have reverted to the embryonic type. Microscopical examination in such cases shows greatly increased numbers of mother cells, daughter cells, nucleated red corpuscles, and ordinary red corpuscles. Another evidence of increased activity on the part of the marrow is the presence in the blood of the so-called polychromatophilic red corpuscles, which were first described by Gabritchewsky. These are red corpuscles, nucleated or non-nucleated, which exhibit a variation from the normal in staining reaction. The normal red corpuscle, when stained with the Ehrlich-Biondi triple stain, is of an orange color. In cases of severe anæmia certain corpuscles will be seen which stain violet instead of orange. As a rule, fully fifty per cent. of the nucleated red corpuscles are polychromatophilic, and the greater the number of nucleated corpuscles the more numerous are the non-nucleated polychromatophiles. This abnormal staining reaction was at first believed to be an evidence of degenerative change (necrobiosis; Ehrlich); but, as it is so frequently seen in nucleated red corpuscles, and as such corpuscles are undoubtedly immature, the consensus of opinion at present is that polychromatophilia is an evidence of increased new formation of red corpuscles. The whole process is an attempt at regeneration on the part of the blood-making organs, and the appearance of nucleated and polychromatophilic red corpuscles in the blood is an evidence of such a process. In cases of severe anæmia (1,500,000 red corpuscles or less to the cubic millimetre) careful examination of the blood will, in a great majority of the cases, show the presence of nucleated and polychromatophilic red corpuscles. Where recovery takes place, the number of red corpuscles increases, there is no longer any necessity for abnormal activity on the part of the marrow, and the nucleated and polychromatophilic red corpuscles gradually disappear from the blood. Where the cases terminate fatally, the marrow usually continues its blood-making activity until the end. In fact, the number of nucleated red corpuscles in the blood may steadily increase, while the total number of red corpuscles is steadily diminishing. The marrow continues its hopeless fight until the end, though steadily losing ground all the while.

Now it has been noted in a certain small number of cases that the bone marrow loses its power of forming red corpuscles comparatively early. In these cases the anæmia steadily increases, and the cases always terminate fatally. Such cases can be recognized by examination of the blood, as they show no evidence of any attempt at regeneration, i. e., no nucleated or polychromatophilic red corpuscles are to be found. Ehrlich has reported such a case in 1884. The patient had suffered from severe post-partum hæmorrhage and was very anæmic. A blood examination failed to show any nucleated red corpuscles, and the patient died within a week.

The following cases have been seen by the writer during the past five years:

CASE I. *Purpura Hæmorrhagica with Extreme Anæmia.*—Seen at the Johns Hopkins Hospital, Baltimore,* March 22, 1894. A. F., a boy, aged ten years. Complaining of pallor and subcutaneous hæmorrhages.

Family and past history negative.

Present illness began eight weeks previously with pallor, debility, and subcutaneous hæmorrhages. Slight hæmoptysis for the last two weeks. No melæna, hæmatemesis, or hæmaturia. No joint involvement.

Physical Examination.—Boy fairly well nourished; marked anæmia; ecchymoses over chest and legs; larger extravasations on shoulders and legs; loud systolic murmur heard over apex of heart. Examination of lungs and abdomen negative.

Urine showed a slight trace of albumin. No casts. Death took place suddenly on March 30, 1894.

Blood on admission: Red corpuscles, 696,000 to the cubic millimetre; leucocytes, 4,000 to the cubic millimetre; hæmoglobin, fifteen per cent.; hæmoglobin index, 1.07.

Stained specimens practically negative. No nucleated nor polychromatophilic red corpuscles seen in a large number of specimens. Little poikilocytosis (abnormalities in shape). Little schizocytosis (abnormalities in size). Daily examination of the blood showed a progressive diminution in the number of red corpuscles.

March 30th.—Blood: Red corpuscles, 483,000 to the cubic millimetre; leucocytes, 7,000 to the cubic millimetre; hæmoglobin, fifteen per cent.; hæmoglobin index, 1.5.

An unfavorable prognosis, based upon the severe anæmia and absence of any attempt at regeneration on the part of the blood-making organs, was given. This was confirmed by the death of the patient eight days later.

CASE II. *Purpura Hæmorrhagica with Severe Anæmia.*—Seen at Dispensary of St. Vincent's Hospital, New York city, August 15, 1895. P. D., a boy, aged a year and six months. Complaining of debility and subcutaneous hæmorrhages.

Family history and past history negative. Has always been rather delicate.

Present illness began five weeks previously with an eruption of subcutaneous hæmorrhages over the entire body. Child soon became pale and weak. Two weeks later he vomited about half a cupful of blackish coagulated blood, and for three days thereafter stools were tarry. Appetite remarkably good. No fever. No involvement of joints.

Physical Examination.—Fairly well-nourished child. Marked anæmia and a waxy look to the skin. Scattered subcutaneous ecchymoses over entire body, most numerous on legs. Several large extravasations on posterior aspect of legs, especially in popliteal spaces. Soft systolic murmur heard over apex of heart. No venous hum in neck. Examination of lungs and abdomen negative. Specimen of urine not obtained.

Blood: Red corpuscles, 1,300,000 to the cubic millimetre; leucocytes, 18,200 to the cubic millimetre; hæmoglobin, twenty-two per cent.; hæmoglobin index, 0.8.

Stained specimens showed moderate poikilocytosis of

red corpuscles. No nucleated nor polychromatophilic red corpuscles seen. A differential count of the leucocytes showed the moderate leucocytosis to be due to an increase in the so-called polynuclear forms. Multinuclears, 79.7 per cent.; lymphocytes, 9.3 per cent.; large uninuclears, 8.6 per cent.; eosinophiles, 2.4 per cent.

August 22, 1895.—No improvement. Pallor more marked. A few fresh subcutaneous hæmorrhages. Mother stated that diaper had been stained red four days previously.

Blood: Red corpuscles, 993,000 to the cubic millimetre; leucocytes, 3,200 to the cubic millimetre; hæmoglobin, eighteen per cent.; hæmoglobin index, 0.9.

Stained specimens as previously.

A very bad prognosis was given for the same reasons as in Case I. The case was not seen again, but upon inquiry it was learned that the child died August 31, 1895.

CASE III. *Progressive Fatal Anæmia following Childbirth.*—Case seen in consultation, February 15, 1897. E. M., a woman, aged thirty-three years; married. Complaining of great pallor and dyspnœa.

Family history negative.

Past History.—Patient had always been strong and healthy. No serious illness. Married three years. Menses regular; never profuse. No tendency to hæmophilia.

Present Illness.—Patient gave birth to a dead fœtus (her first pregnancy) six weeks previously. She had been under the care of another physician, so that details of the labor were not obtainable. Labor lasted about forty-eight hours, and death of child was supposed to be due to pressure on the umbilical cord. Twenty-four hours after the termination of labor the patient had a severe hæmorrhage. This was finally checked, but was followed by two more hæmorrhages during the next two days. A change of physicians was made, and the second attendant found the patient almost exsanguinated. A portion of the placenta had been retained and there were severe lacerations of the cervix and perinæum. She was given tonics and iron, but no benefit ensued, though she was able to leave her bed for a week. The anæmia and dyspnœa persisted and she was compelled to take to her bed again.

Physical Examination.—Fairly well-nourished woman. Very anæmic. Soft, blowing systolic murmur heard over entire cardiac area. Marked venous hum in cervical veins. Examination of lungs and abdomen negative. Urine is said to have contained 0.1 per cent. albumin. Pale. No casts.

Blood: Red corpuscles, 898,000 to the cubic millimetre; leucocytes, 26,000 to the cubic millimetre; hæmoglobin, twenty per cent.; hæmoglobin index, 1.1.

Stained specimens showed moderate poikilocytosis and schizocytosis. No nucleated nor polychromatophilic red corpuscles seen in twenty specimens. Leucocytosis due to an increase in the so-called lymphocytic elements; a lymphæmia. Multinuclears, 19.2 per cent.; lymphocytes, 68.6 per cent.; large uninuclears, twelve per cent.; eosinophiles, 0.2 per cent.

Prognosis most unfavorable. The patient died three days later.

CASE IV. *Pernicious Anæmia; Arthritis Deformans.*—Seen at dispensary of the Presbyterian Hospital, August 13, 1898. A. M., a woman, aged forty-seven years; single. Complaining of painful swelling of wrists, pallor, and oedema of ankles.

Family History.—Mother and maternal grand-

* This case was reported by the writer in the *Johns Hopkins Hospital Bulletin*, vol. v, 1894, p. 65.

mother both suffered from the same joint affection as the patient.

Past History.—Always healthy. Dyspeptic. Arthritis deformans limited to carpal and metacarpal joints for twelve years.

Present Illness.—Began eight months previously with debility, increasing pallor, and dyspnoea. Has lost weight. Urine, two per cent. albumin. Few hyaline casts.

Physical Examination.—Sparely nourished woman. Marked anaemia. Slight earthy jaundice. Soft systolic murmur heard over apex of heart. Faint venous hum heard over cervical vessels. Both kidneys palpable. Lungs clear. (Edema of ankles.)

Blood: Red corpuscles, 1,344,000 to the cubic millimetre; leucocytes, 9,200 to the cubic millimetre; haemoglobin, forty-eight per cent.; haemoglobin index, 1.8.

Stained specimens showed moderate poikilocytosis and schizocytosis. No nucleated nor polychromatophilic red corpuscles. Leucocytes. Marked increase in the lymphocytic forms. Lymphocytes, 84.3 per cent. Large mononuclears, 6.1 per cent.; polynuclears, 9.5 per cent.; eosinophiles, 0.1 per cent.

August 20, 1898.—No improvement.

Blood: Red corpuscles, 1,060,000 to the cubic millimetre; leucocytes, 18,300 to the cubic millimetre; haemoglobin, thirty-nine per cent.; haemoglobin index, 1.3.

Stained specimens as before, 94.3 per cent. lymphocytes.

Prognosis entered as most unfavorable. Patient died at her home two weeks later.

CASE V. Carcinoma of Uterus with Grave Anaemia.—Seen at Bellevue Hospital, January 30, 1899. M. C., a woman, aged thirty-five years; married. Complaining of weakness and abdominal pain.

Family history negative. Past history negative.

Present Illness.—Increasing pallor and dyspnoea for six months. Has had attacks of pain in lower part of abdomen for about a year. Menses irregular but not profuse. No intercurrent hemorrhages.

Physical Examination.—Fairly well-nourished woman. Marked anaemia. Slight waxy color of skin. Soft systolic murmur over apex of heart. Soft venous hum heard over cervical veins. Examination of lungs and abdomen negative. Examination by gynecologists revealed the presence of a tumor of the fundus of the uterus, in all probability cancerous. Urine examination negative.

Blood: Red corpuscles, 1,021,000 to the cubic millimetre; leucocytes, 19,200 to the cubic millimetre; haemoglobin, nineteen per cent.; haemoglobin index, 0.9.

Stained specimens showed no poikilocytosis nor schizocytosis. No nucleated red corpuscles. A few polychromatophilic red corpuscles. Leucocytosis due to an increase in the polynuclear forms. Multinuclears, 81.2 per cent.; lymphocytes, 12.1 per cent.; large mononuclears, 6.1 per cent.; eosinophiles, 0.4 per cent.

February 1st.—No improvement.

Blood: Red corpuscles, 992,000 to the cubic millimetre; leucocytes, 21,300 to the cubic millimetre; haemoglobin, eighteen per cent.; haemoglobin index, 0.9.

Stained specimens as before. No nucleated red corpuscles seen in fifteen specimens. Leucocytosis polynuclear.

Prognosis unfavorable. Patient died one week later.

REMARKS.—The cases reported above, while too few in number to warrant any definite conclusion, go to show

that the absence of nucleated red corpuscles in the blood in cases of grave anaemia indicates that there is no new formation of red corpuscles taking place, and that therefore the prognosis of such cases is extremely unfavorable. The writer has attempted to make a special study of diseases of the blood during the past seven years, and in that time has examined the blood in a large number of cases of severe anaemia. The cases reported above were the only ones seen in which the number of red corpuscles sank below 1,500,000 to the cubic millimetre with absence of nucleated red corpuscles. In examining stained specimens for the presence or absence of such corpuscles it is necessary to use a mechanical stage, and to make a thorough millimetre search of at least ten specimens. Several times the writer has failed to find nucleated red corpuscles in the first few specimens examined, only to find one in the fifth or sixth specimen. Where the blood is smeared on the slide instead of on the cover glass, such a specimen is equal to three or four cover-glass specimens—so that the examination of three "slide" specimens would be sufficient.

Many cases were met with which showed an extremely small number of red corpuscles with the presence of nucleated red corpuscles in varying numbers. It would make this article too long to quote any of these cases, of which a typical example was reported by the writer in the *Medical News*, October 16, 1897, under the title of *A Case of Infantile Malarial Fever with Grave Anaemia*. The presence of nucleated red corpuscles in the blood by no means warrants a favorable prognosis, their very presence being an indication that the blood-making organs are being pushed beyond their limit of production of normal red corpuscles. Many such cases prove fatal, as, for example, those of typical progressive pernicious anaemia. But, on the other hand, many end in recovery, as in the case quoted above. Where the red corpuscles are above 1,500,000 to the cubic millimetre (to be conservative) the presence or absence of nucleated red corpuscles is of little significance; but where they are below that number, and where no nucleated red corpuscles are to be found, a fatal result may be confidently expected.

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RETENTION OF URINE.

By RAMON GUITÉRAS, M.D.

THIS term designates an inability, on the part of the bladder to empty itself on a constant or occasional obstruction. It is variously characterized as complete or incomplete, according to the degree of obstruction; acute or chronic, depending upon the duration; and variety of the attack; and traumatic, organic, or obstructive, referring to the nature of the cause.

* Read before the Society of the A. M. of the City of New York, December 11, 1898.

Complete retention, from whatever cause, is a condition in which the patient can not pass any urine from the bladder; it is incomplete when he can empty it only in part, a certain residuum, of from a drachm to a pint, always remaining in the bladder; the urine which passes represents the excess over this residuum. Acute retention occurs when the patient suddenly finds that he can not pass any urine, though he may never before have had any difficulty; it is chronic when for a long time he has not been able to empty his bladder; and paralytic when his inability to void urine is due to paralysis of the bladder wall or to a lesion of either brain or cord.

Retention is obstructive when, owing to some growth or impediment in or about the neck of the bladder or urethra, either no urine or not all of it can be forced out; it is traumatic when some wound gives rise to an impediment either in the urethra itself or on the outside which presses upon it.

Occasional acute attacks of retention may be due to operations, alcoholism, profound temporary stupor, or voluntary refraining from urinating; all other cases are dependent upon chronic conditions and are attended with a loss of power in the bladder wall. It applies as well to paralytic as to obstructive cases. The loss of power is variously referred to as paralysis, paresis, and atony. There is really very little difference between certain degrees of these conditions. Complete paralysis of the bladder is found when on account of some brain or cord lesion it is incapable of expelling any urine. Paralysis is partial when the bladder is not able to empty itself fully; paresis is another name for partial paralysis; and atony is a condition where through lack of power the bladder wall can not force out all its urine. Some writers try to explain this difference by saying that paralysis is a condition where the action of the detrusor and the sphincter muscles is completely suspended, while in atony the contraction of the organ is feeble, slow, and imperfect. Coulson says that many refuse to admit the existence of paralysis, excepting when the motor centres are affected. He thinks that the stretching of the nerves of the bladder wall in retention injures them and interferes with their reflex activity, thereby being just as much a cause of atony as the loss of contractile power of the muscles. He thinks it probable that peripheral affection of the nerves may be caused by an overdistention of the bladder. Where the nervous irritability is diminished, but not lost, the contraction of the muscular wall feeble, and a state of partial paralysis or loss of power present, we may use the term atony or paresis of the bladder.

Others say that atony of the bladder is lack of expulsive force due to failure on the part of the muscles, the nerves remaining sound, and that paralysis is the same condition, only more pronounced and due to central origin. At any rate, both in atony and in paralysis, the bladder may be constantly distended by urine to a certain extent, perhaps to its utmost limit, as a passive

sack, and the excess of this residuum may dribble away involuntarily (false incontinence); or it may be expelled in small portions by repeated acts of urination in the ordinary way with the aid of great straining and assistance of the voluntary contractions of the muscular wall of the abdomen.

The causes of atony are: overdistention by neglecting to urinate, involuntary retention in cases of fever and coma, and urethral obstructive conditions. The muscular coat of the bladder may be paralyzed from any cause that will induce loss of muscular power in other parts of the body, and the paralysis may affect either the detrusor urinæ, or the sphincter vesicæ, or both at the same time. Power may be diminished or wholly lost, and this impairment of function may be temporary or permanent.

The muscles of the bladder which expel or retain the urine are only partially under the control of the will. Thus the contraction of the detrusor is involuntary, being occasioned as a reflex from the stimulus of the urine in the bladder. When sensibility is diminished and the presence of urine no longer acts as a stimulus on the detrusor, the result is urinary retention. The exact location and nature of the sphincter is still a matter of dispute. According to some authorities, the circular fibres serve to close the viscus at its neck, while others regard the compressor urethræ as an external sphincter, although it probably aids only in the expulsion of urine. Still, it is true that this muscle, the compressor urethræ, must relax under the influence of the will before the contents of the bladder can escape.

It is well to remember also that the bladder muscle may be directly paralyzed by overdistention, as already stated, or by inflammation extending from either its mucous or its serous coat.

CAUSES.

Acute Retention.—Acute or temporary retention may be due to operations on or about the external genitals, anus or rectum, or upon parts of the body quite distant from this locality depending upon a spasmodic inability to urinate. It may also be due to acute alcoholism or to large doses of opium, belladonna, or hyoscyamus, especially when given by rectum. Profound temporary stupor, such as occurs in typhoid fever or other prostrating diseases, causes it at times. Voluntary refraining from urinating, although the desire may be very great, as when one is in company in a place where there is no opportunity, and holds his urine until the bladder is so full that its walls are unable to contract, is also at times a cause of retention. It may also be found in pregnant women, due to some displacement of the uterus, which thereby presses upon the bladder. If it occurs after delivery, it is due to displacement of the bladder or to the effect of long pressure upon its neck by the child's head.

Acute attacks may also occur during chronic ob-

structive conditions, such as stricture or enlarged prostate from various causes.

In the majority of cases retention is due either to organic nervous lesions or to obstructions involving the urethra.

CHRONIC RETENTION. *Certain Organic Nervous Diseases Cause Retention.*—In paraplegia, in hemiplegia, and in locomotor ataxia we may have complete or partial retention due to motor paralysis.

In Pott's disease we may have retention with incontinence, due to paralysis by interference with the vesico-urethral nerve centres.

In injuries of the brain and spinal cord the same applies. These are attended by important changes in the urinary system as well as in the urine. These changes do not seem to be connected with the particular locality of the injury. They occur almost uniformly, whether the injury affect the lumbar, the dorsal, or the cervical region.

In the various forms of spinal sclerosis there may be more or less complete retention, in the earlier stages of a spasmodic nature (during the stage of excitement), and later, due to paralysis.

The Obstructive Causes.—They are principally situated in the prostate or the urethra, although occasionally pedunculated tumors or vesical calculi may swing into the neck of the bladder and engage there. Displacement and fracture of pelvic bones, especially of the pubes, may also cause obstruction.

Prostatic causes of obstruction are acute prostatitis, and hypertrophy, tumors, cysts, concretions, or tuberculosis of the gland.

The urethral cause is usually a stricture. The retention may be due to an acute congestion of the mucous membrane or of the submucous tissue about this lesion, or it may be a late symptom dependent upon the great obstruction offered by the stricture itself. In either case it is apt to be preceded by a history of fatigue, cold, and alcoholic excesses. Spasm of the urethra aids in closing the canal. Foreign bodies, calculi, blood clots, and polypi of the urethra may also cause retention.

Atresia is another cause. This may give rise to complete retention in the newborn if the urethra is impervious; or, if it is slightly pervious, the trouble will come on gradually. This latter condition is really a congenital stricture.

Wounds of the urethra also give rise to retention, either by causing a congestion or an exudate which narrows its calibre, or by pressing upon its walls on the outside, and thus rendering it impervious.

Extravasation of urine, due to rupture of the urethra from an injury or wound, or to rupture of a urethral follicle, may allow sufficient leakage of urine into the surrounding tissues either in the pendulous portion of the urethra or the perineum, to completely block the canal by its pressure.

Abscesses or cellulitis starting in the urethra or sur-

rounding tissue may also exert enough pressure upon the urethra to shut it off.

Symptoms.—The symptoms of retention vary in a marked degree.

In an acute attack, such as occurs after an operation or during a fever, the patient complains of pain steadily increasing in the region of the bladder, and a sense of fullness and inability to micturate, associated with a constant desire. On pressure over the pubes there is a feeling of tenderness and distention, and perhaps a globular tumor can be made out extending up above the pubes toward the umbilicus. Rectal examination will usually reveal a tumor filling the pelvis like a gravid uterus.

Chronic complete retention rarely occurs, as it is usually associated with incontinence. It may be observed, however, in certain cases of paralysis or obstruction. In complete retention, such as occurs in some cases of paralysis, the patient may not have been able to void a drop of urine for months. He knows, however, when his bladder is full, either by the sensation, or, in cases of paralysis where sensation is not perfect, by the knowledge of how long it takes it to fill, and he has learned at these intervals to have recourse to his catheter.

In a chronic case of incomplete retention the symptoms are also different. In this class all cases tend to have residual urine, and the condition develops so slowly that the patients often do not know that they can not empty their bladders until they have been so informed by the physician after an examination. A man with a weak bladder may carry about a pint or more of clear urine in this viscus for many years as a residual deposit, which its weakened walls can not throw off. An excess of the fixed residuum produces a desire to urinate, and the patient, mainly by voluntary contraction of the abdominal muscles, is able to void this excess.

Acute attacks of retention in cases of chronic incomplete retention occur principally where there is obstruction to the escape of urine in the form of stricture or enlarged prostate, and in this latter class of cases it is very common.

A patient with prostatic hypertrophy suffers from chronic incomplete retention, in addition to which his bladder is usually atonic and chronically inflamed. The usual symptoms are those of cystitis, pain, frequency of micturition, and the passage of a thick, foul-smelling urine. After overeating or drinking, or exposure to cold or to wet, these patients suddenly find that they can not pass urine. As the bladder dilates they have a feeling of pain and a sense of retention, which is usually relieved by the methods which we shall mention under "Treatment."

Cases of acute attacks of retention due to stricture are also common. Here also there is usually a certain amount of residual urine in the bladder. In bad cases the urethra behind the stricture is dilated, at times even

as far back as the neck of the bladder, which itself becomes dilated and no longer acts as a sphincter. The urine involuntarily escapes through the stricture in a sitting or a standing position. Here it is often difficult to expel the urine. Great straining and prolapse of the rectum may accompany the act. Retention with incontinence at the same time may occur here, as the urethra and bladder behind the stricture are full of urine, which can be discharged only at times by leaking through the stricture.

In all these cases, where the bladder can not empty itself, retention becomes chronic. Cystitis develops, together with residual urine. The contents are partly evacuated with each act of micturition, yet some pus, bacteria, and alkaline urine remain in the bladder to contaminate the fresh urine flowing into it.

Note.—The contractile power of the bladder becomes insufficient to expel the urine, and the result is residual urine. The bladder wall becomes stretched and atonic. The distention may increase until the sphincter relaxes and the urine dribbles away.

Diagnosis.—When we are called to see a case of retention of urine we must first ascertain if it really is retention, and then inquire carefully into the history of the case, whether it is complete or incomplete, and if complete, whether it is an acute attack or not; and if an acute attack, whether the patient has had others of a similar nature. We should then notice if he has any other symptom, general or local, which can give us some clue as to the cause of retention; also inquire into his age and family history.

To be sure that he has an attack of retention, there are certain other conditions that we must exclude, as suppression, rupture of the bladder, and extravasation of urine.

It is strange how generally suppression and retention are confounded with one another. Suppression is a condition where the function of the kidney has ceased, and retention where the bladder can not empty itself. If no urine can be passed by the urethra, and it is a question between suppression and retention, a bimanual examination per rectum and suprapubically will disclose the presence of a large fluid tumor in the latter case, and a catheter inserted into the bladder will draw off a quantity of urine in the latter case and none in the former.

Rupture of the bladder can be distinguished from retention, as in the case of the former there is no well-defined globular tumor present, and a catheter passed by the urethra will bring away only a slight amount of urine and blood. The patient will complain of great pain and tenderness in the suprapubic region, and tympanites, an elevation of temperature, and rapid pulse will quickly follow.

In extravasation of urine the bladder may be quite full on account of the pressure of the exuded urine on the urethra; it may be impossible, however, to pass

an instrument into the bladder on this very account. The extravasation can be seen as a tumor in the perineum or external genitals.

The history of a case of retention will reveal a great deal to us, as will a survey of the symptoms. For instance, if there is a history of an operation on the genitals or about the rectum, an acute attack of retention can be ascribed to that source. If the patient has had a fall and is paralyzed below the waist, it would indicate a retention due to paralysis. Likewise, if he has had a stroke of apoplexy, or a fracture of the skull, or is suffering from transverse myelitis, and we see other evidences of paralysis, we can assume that the retention is due to this cause and not to any local condition. To show that injury to the cord is followed by bladder dilatation, I will quote an experiment of Budge, who found that division of the cord in the lower dorsal region was followed by increased reflex action of the sphincter and a greater degree of distention of the bladder than could be produced after death.

It is rare that retention is so complete that not a drop of urine can be passed, but we do observe cases in complete and partial paraplegia where not a single drop can be voided without the catheter.

Having excluded paralysis as a cause of retention, we should then look for some local trouble to account for it. If the man is over fifty-five years of age and has a history of trouble in urinating, the stream coming tardily; and if he suffers from such frequency of urination as to be obliged to get up frequently at night; and if, on certain occasions, he was unable to pass his urine except when aided by a hot bath or by hot local applications, we can assume that he has some prostatic trouble, and can examine him per rectum and per urethram to see if obstruction is present there. If an enlargement is found, it is probably occasioned by senile prostatic hypertrophy. Of course, there are other prostatic troubles that may give rise to enlargement, as malignant tumor, tuberculosis, and cystic conditions, but these are rare.

If the patient is a man between twenty-five and fifty years of age, who has had several attacks of urethritis, and has recently urinated with increased frequency and with some difficulty and pain, his urethra should be explored for stricture, and if one of small calibre is found it is probably the cause of his retention.

When it has been determined in chronic cases of retention that residual urine is present, it is well to consider the condition of the bladder. We can form some idea of the tone of its wall by introducing the catheter. If there is no atony, the stream rushes through the catheter until the viscus is emptied. If there is atony, it will run out slowly, and toward the end is influenced by the breathing. In all cases of retention we must ascertain the presence or absence of cystitis, and if it is not present, we should use every effort to prevent it. Cystitis is caused by congestion and infection. In cases of retention, due either to paralysis or to

obstruction, there is distention of the bladder walls with consequent congestion. This is favorable to the production of cystitis, if the exciting cause (or infection) is carried in by the catheter.

Patients with cystitis may suffer agony from pain, frequency of urinating, and tenesmus. Others may have a flabby bladder, discharging stringy mucus and ammoniacal urine, with no other symptom than a sense of weight in the lower abdomen and a frequent desire to urinate. Motion, such as jolting and rough riding, may cause pain in the hypogastrium, perineum, and end of the penis associated with a frequent desire to urinate.

(To be concluded.)

INHIBITION.*

By S. J. MELTZER, M. D.

(Continued from page 656.)

Reflex Inhibition.—In the systems we have thus far examined the inhibition has been found to be present in the peripheral ends of the nerves, and is to be obtained by stimulation of the peripheral end of the divided nerves—for instance, the peripheral end of the vagus, the splanchnicus, the lingual nerve, etc. But we have also met with instances of reflex and central inhibition—for instance, the inhibitions of respiration, of deglutition, the stimulation of the nervus depressor, the inhibition of the heart by the stroke experiment of Goltz, the inhibition of the lymph hearts, etc. We are now going to tabulate inhibitory phenomena mostly occurring in the skeletal muscles and brought out by reflex stimulations from some part of the skin or from the central end of a non-specific sensory nerve.

The above-mentioned stroke experiment—i. e., the inhibition of the heart beat by striking the abdomen of a frog—can not occur, according to Goltz (86), if at the same time the leg is pinched. On the other hand, the pinching of the leg does not cause any reflex movement if the abdomen is struck at the same time. A frog without hemispheres responds promptly to every gentle stroke on the back with a croak; this phenomenon is known as the croak reflex (Goltz (87)). This reflex also is suppressed by a stimulation simultaneously applied to the leg [Goltz (88)]. Schlösser (89), however, states that the reflex is prevented not by inhibition but by an antagonistic reflex causing the closure of the glottis. If the leg of a decapitated frog is immersed in a solution of sulphuric acid it is withdrawn after a certain interval. This interval is prolonged if the other leg is pinched at the same time. All reflex movements of the legs are immediately inhibited when the skin on the back or on one arm is subjected to a chemical, mechanical, or electrical stimulation [Lewison (90)]. If the central end of the sciatic nerve of one side of a decapitated frog is stimulated with the induction coil for some time, only a short reflex movement of the other leg occurs

at the beginning of the stimulation, and another movement at the interruption of the current, but there is absolute rest during stimulation. And during stimulation the leg is not withdrawn from acid if it is immersed there [Setschenow (91), Nothnagel (92)].

If a decapitated snake is suspended by its upper end the body regularly makes rhythmical, pendulous movements. These movements stop immediately as soon as the body is gently touched [Luchsinger (93)]. According to Langendorff (94), stroking over the region of the tympanum or eye of a frog causes throwing movements of the leg of the opposite side: this reflex, too, is inhibited by stimulation of a sensory nerve. Goltz (95) and Freusberg (96) have reported a number of reflex inhibitions which they have observed in a dog whose spinal cord was divided in the thoracic region. In this animal the anal sphincter showed rhythmic contractions, which could be stopped by squeezing the foot; there were also frequent contractions of the rectum, which could be inhibited by pinching the skin. When a thermometer was introduced into the rectum it was immediately pushed out; but was made to stay there by pinching the skin of some part of the abdomen. Brown-Séquard (97) observed the rhythmic contractions of the sphincter in guinea-pigs even when there was only a hemisection of the cord; here, too, the contractions were inhibited by squeezing the foot. Erections could be caused by certain reflex stimulations, but were promptly inhibited by electrical stimulation of the anal skin or the testicles. Reflex micturition could be inhibited by stimulating the legs. When the dog was in a fasting state the hind leg used to show rhythmic pendulous movements, which could be inhibited by pinching the tail.

Boubnoff and Heidenhain (98), in their experiments on the cortex of the dog, report that under morphine anaesthesia a tonic contraction of the leg was easily brought on, but could be made to relax by a gentle mechanical or electrical stimulus applied to the skin of the same side.

Sherrington (99) found that stimulation of the central end of the sciatic nerve inhibits the knee-jerk. The same can be attained by stimulating the central end of the nerve of the flexor muscles of the thigh, or by squeezing the central end of the flexor muscles, or by gently stretching them (100). All these manipulations relax the tonus of the extensor and inhibit the knee-jerk. These observations, however, are perhaps not to be classified among the reflex inhibition phenomena, since the pendulum seems to swing at present in the direction of the belief that the knee jerk is of muscular origin. In a previous communication Sherrington (101) reported having obtained a tonus of the extensor of legs and arms in dogs whose brains had been cut at the level of the crura cerebri. This tonus he could inhibit by stimulating the skin of the extremities or the central end of

the corresponding nerves, and even of the dorsal nerve root. In a very recent communication Sherrington (102) further reports that in the removal of the cerebral hemispheres he has discovered a reliable method of obtaining general extensor spasms, which he terms "decerebrate rigidity," and which is developed and maintained by centripetal impulses coming from each corresponding limb. In such an animal with "decerebrate rigidity" the reflex inhibitory phenomena are striking, and can be demonstrated with the greatest ease.

Inhibition from the Central Nervous System.—Leaving now the peripheral inhibitory reflexes as well-established phenomena, we turn our attention to the central nervous system. Setschenow (103) has found that stimulation of the thalami optici and corpora quadrigemina increases the reflex time—i. e., that a frog withdraws his leg from a solution of sulphuric acid much later if the above-mentioned parts were stimulated at the same time; he therefore believed that inhibitory centres for the spinal reflexes were located within the optic thalami and the quadrigeminal bodies. We shall not speak here of the long and lively discussion which followed this assertion. According to Ott and Woodfield (104), the optic thalami contain a centre for the inhibition of the peristalsis. It has already been mentioned above that Pflueger and Pal have obtained inhibitions of the peristalsis by stimulation of the spinal cord. Sherrington (105) obtained inhibition of the decerebrate rigidity by stimulating the dorsal spinal columns in the cervical region. Sherrington, as well as Horsley and Löwenthal (106), obtained inhibition by stimulating the surface of the cerebellum.

With regard to the cerebral cortex we have to recall here again that Bounbnoff and Heidenhain were the first ones to observe that under certain conditions stimulation of the cortex had an inhibitory effect upon the tonic contractions of some extensor muscles. The recent important observations of Sherrington, however, shed a bright light upon our subject. In experiments made together with A. E. Hering (107) upon monkeys, which, when in a certain state of anaesthesia, show a rigidity of the muscles, it was found that in stimulating the cortical area for the flexors these muscles contracted, while at the same time their antagonists relaxed, and in stimulating the area for the extensors these muscles contracted while the flexors relaxed. In the paper on these experiments, as in the paper on the decerebrate rigidity, Sherrington points out the remarkable fact that the cortical area for inhibition of a group of muscles coincides not with the area for contraction of this group, but with the area for contraction of the group of muscles antagonistic to it. In another series of experiments Sherrington (108) has cut the third and fourth cranial nerves of the left side in monkeys, which paralyzes all the eye muscles except the rectus externus. There was then no muscle left which could by active contraction move the eye to the right. Nevertheless,

when the cortical area in the frontal or in the occipital region was stimulated, which usually produces conjugate movement of both eyes to the right side, also the left eye was seen promptly moving to the right until it reached the median line, which can only mean that the tonus of the left rectus externus, which kept the eyeball turned to the left, was inhibited by the cortical stimulation and thus permitted the eye to return, by the force of the elasticity of the surrounding tissue, to the normal position. The same result was obtainable when the cortex was removed and the corona radiata or the internal capsule was stimulated. The inhibition in question probably takes place in subcortical centres. Topolanski (109) has verified this statement of Sherrington's by the graphic method. He removed the anterior insertions of the rectus externus and the rectus internus from the eyeball of a rabbit and connected them with levers marking the movements on a kymograph, and he found that a cortical stimulation which caused the contraction of one muscle caused at the same time the elongation or relaxation of the antagonist. In connection with this remarkable series of experiments of Sherrington's, the first part of which appeared in 1893, I may be permitted to quote part of a passage of an article of mine (110) published in 1883, which reads as follows: "Of a purposeful arrangement we could expect that, for instance, a nerve, the stimulation of which causes flexion, ought to contain also inhibitory fibres for the extensors. Now, such an arrangement is indeed present—at least in one function—namely, in the respiratory mechanism. Of the superior laryngeal nerve, of the second branch of the trigeminus, and of the splanchnicus, we know that stimulation of their central end causes inhibition of the inspiratory and contraction of the expiratory muscles." But the following quotation, which I can not restrain myself from giving in full, is indeed a marvel. It reads as follows:

"The nerves have been considered so generally as instruments for stimulating the muscles, without thought of their acting in the opposite capacity, that some additional illustration may be necessary here. Through the nerves is established the connection between the muscles, not only that connection by which muscles combine to an effort, but also that relation between the classes of muscles by which the one relaxes and the other contracts. I appended a weight to a tendon of an extensor muscle, which gently stretched it and drew out the muscle, and I found that the contraction of the opponent flexor was attended with a descent of the weight, which indicated the relaxation of the extensor. To establish this connection between two classes of muscles, whether they be grouped together as in the limbs, or scattered widely as the muscles of respiration, there must be particular and appropriate nerves to form this double bond to cause them to conspire in relaxation as well as to combine in contraction."

So in 1826 said Charles Bell.* Twenty years before the discovery of the effect of the vagus upon the heart, inhibition was a natural supposition to this great mind, and not only did he expect to find it in all muscle groups, but tried to establish by an actual experiment the presence of the mechanism for the contraction and relaxation of antagonistic groups of muscles, a mechanism which is now termed by Sherrington "reciprocal innervation."

Returning to inhibition within the central nervous system, I have to record here the fact that an impulse which causes inhibition in a centre attending to a specific function, irradiates, spreads from there to other centres and functions which neither anatomically nor physiologically are directly connected with the primary centre. I (111) have shown that the inhibition which appears in the centre of deglutition during each swallow diminishes the tonus of the cardio-inhibitory and the vaso-motor centres, inhibits respiration and affects centres located in the lower part in the spinal cord, and may even inhibit reflexes caused by peripheral stimuli. Hering (112) observed that distention of the lungs, which sends an inhibitory impulse to the centre of respiration, depresses also the tonus of the cardio-inhibitory and the vasomotor centres.

Inhibition in Voluntary Acts.—It is an interesting and important question how much, if any, inhibition is involved in the suppression of the so-called voluntary movement. Eduard Weber (113) has from the start compared the cardiac inhibition to the voluntary suppression of the tonic contractions of the sphincter ani and vesicæ. But this suppression can be interpreted as an act of pseudo-inhibition, inasmuch as it could be maintained that the voluntary contraction of the muscles of the abdominal wall simply forced the contents of the rectum and bladder through the contracted sphincters. That the soles are not withdrawn when they are tickled, or that we do not laugh when we have cause for it, which facts have been adduced by some as instances of voluntary inhibition, can also be explained by the fact that either we have trained the muscles antagonistic to the movement of these reflexes, or that the involved centres have lost their sensitiveness. In the discussion on this subject some writers have brought forward the assurance that they can voluntarily inhibit sneezing, and even yawning, without the aid of antagonistic muscles. But it is only an assertion, and not a proof. The voluntary interruption of a voluntary movement seems to me mostly accomplished by the aid of the antagonistic muscles, even if inhibition, too, is involved in the act; and we might expect this the more since Sherrington has shown that the cortical area for inhibition coincides with the area of contraction of the antagonistic muscles, and thus the impulse originated in this area might affect both fac-

tors at the same time. With regard to the voluntary interruption of a reflex inspiration, Gad (114) asserts that according to his observation on himself the interruption is simply inhibition without the aid of the expiratory muscles, and hence his conclusion that the inspiratory command to the diaphragm must be of the nature of tetanus and not a single impulse. This, too, is after all only an assertion which is hard to prove, as I know by my own observations on myself. It seems to me, however, that the observations of Bowditch and Warren (115) on the reinforcement of the knee-jerk by a voluntary contraction of some muscles can be adduced as a proof for the involvement of an inhibitory impulse in the voluntary movements. These investigators have found that if the voluntary contraction precedes the blow on the tendon by a perceptible interval the result is rather an inhibition than a reinforcement of the knee-jerk, which would seem to demonstrate that with each contraction a wave of inhibition runs ahead of the wave of contraction. Quite a sure proof, however, of the actual participation of inhibition in voluntary movements is to be found in the above-quoted experiment of Sherrington's on the eye muscles of the monkey. The animals whose left third and fourth cranial nerves were cut, so that the rectus externus alone was under nervous control, could, after the recovery from the operation, follow with the left eye all the movements of an object—food, for instance—which was held in front of them. Of course, the object had to be on a level with the eye, and the movements could go to the right no farther than the median line; but the eye moved slowly, or rapidly, or suddenly, according to the movements of the object, just as a normal eye would do, while, in fact, the movements were regulated only by the voluntary inhibition of the tonus of the rectus externus.

That the voluntary movements may be inhibited by artificial stimuli has been reported by A. Fick (116), who has observed the disappearance of a normal maximal contraction upon the application of an electrical stimulus. Waller (117), however, insists, as mentioned above, that the disappearance is due only to the contraction of the antagonists. A. Cleghorn (118), experimenting in the Harvard physiological laboratory, has recently found that an artificial stimulus quickens the normal voluntary relaxation, and by special arrangement he has excluded the participation of the antagonists in this process.

Inhibition of Sensations.—I have thus far dealt with the central inhibition of such afferent impulses, the natural destination of which was to be carried out again from the central organ to the periphery. Of the inhibition of afferent impulses for which the central organ is the end station, and the presence of which can be recognized only by their appearance in the narrow path of our consciousness—in short, of inhibition of sensory impulses—I can make only a very scant statement. The subject has practically not yet been studied, either

* *The Anatomy and Physiology of the Human Body*, by Charles and John Bell, London, 1826. John Bell died in 1829. See Sherrington, *Proceedings of the Royal Society*, vol. lili, p. 115.

by physiologists or by psychologists. Although a number of instances could be adduced here which would seem to demonstrate the actual existence of a central as well as a reflex inhibition of sensations, such a course would be practically an original contribution, and is beyond my task here, which I have restricted to the recording of well-established observations stored up in our literature. And here I can record only the following few observations on the inhibition of sensation. Setschenow (119) states that the painful sensations which an acid produces when a hand is immersed in it can be retarded and diminished by tickling any other part of the body. According to Urbantschitsch (120), the characteristic sensations which a galvanic or induction current causes when applied to a part of the body are immediately diminished when another current is applied to some other part of the body. Furthermore, when one hand is immersed in hot or cold water and kept there until a burning sensation is felt, this sensation is distinctly diminished for a while immediately upon dipping the other hand also into hot or cold water. Exner (121) illustrates sensory inhibition by a well-known optical experiment, for the description and analysis of which I have to refer to the book of this author.

Inhibition in Muscle-nerve Preparations.—The inhibitory phenomena which were hitherto presented to occur either in the central nervous system or at the ends of peripheral nerves terminating in the viscera. It has been surmised by many writers that inhibition can occur only in nerve centres, and that in the peripheral phenomena inhibition takes place in the nerve cells which are to be found in the heart or in the walls of the gastrointestinal canal. In the blood-vessels, however, so far, at least, no nerve cells have been discovered, and there we have to assume that the vaso-dilators exert their influence directly on the circular muscle fibres of the vessels. I shall record a few more inhibitory phenomena taking place in muscles in which no cell ganglia could be demonstrated. I have already recorded above the distinct inhibitory effect which was studied by Langley and Anderson on the retractor muscle of the penis of the dog. Fletcher (122) reported recently that he could demonstrate the inhibition of the retractor muscle in the hedgehog, and that by the methylene-blue method he had established the absence of nerve cells in this muscle, which consists of plain muscle fibres. Pawlow (123) has stated that by stimulating the nerve of the closing muscle of the anodonta he has observed the relaxation of this muscle when it was in a tonic state, and in this muscle, too, no nerve cells could be discovered. The studies of Biedermann (124) on the muscles of the claw of the crawfish are most interesting. When the abductor was divided and the nerve of the claw was stimulated, it was found that a moderate stimulus caused a relaxation of the tonically contracted adductor, while a stronger stimulus caused its contraction; but when the adductor was cut and the nerve stimulated, the abductor muscle

contracted with a moderate and relaxed with a strong stimulus. When each muscle was separately connected with a lever graphically marking their movements, and the stimulation of the nerve was gradually increased, it was found that the first effect was that of the contraction of the abductor; next came the relaxation of the adductor; and then followed the contraction of the adductor, and about simultaneously with it the relaxation of the abductor took place. These experiments show that each muscle is provided with inhibitory and motor nerves, but that in the abductor it is the motor nerve which is more sensitive, while in the adductor it is the inhibitory nerve. The result is that a stimulus which is sufficient to contract the adductor keeps the abductor relaxed, and that a stimulus which causes the contraction of the abductor either causes directly the relaxation of its antagonist, or is at least insufficient to cause its simultaneous contraction. This is a beautiful example of purposeful reciprocal innervation, as Sherrington terms it, which in this case takes place strictly in the periphery, as the experiments were made on an amputated leg. It should be added that the muscles under question consist of striated muscle fibres.

In the few instances which I have just quoted the muscles either consisted of unstriated muscle fibres, or they belonged to invertebrate animals. There are, however, a few instances which tend to prove the presence of inhibition in the muscle-nerve preparation of the vertebrates also. The immersion of a nerve of a muscle-nerve preparation of the frog in glycerin causes a tetanus of the muscle. C. Kaiser (125) has found that the tetanus is inhibited when an electrical or chemical stimulus is applied to the nerve at the point central from that which is immersed in glycerin. A tetanus can also be brought on by permitting the central end of the nerve to dry out. Wedenski (126) has found that after subsidence of the tetanus, maximal stimuli applied to the nerve fail to elicit any response from the muscle, but the stimuli are immediately effective as soon as the dried-out part of the nerve is cut off, which apparently goes to show that the dried part of the nerve was exerting an inhibitory effect upon the muscle. Both Kaiser and Wedenski believe that the inhibitory process takes place within the nerves, perhaps within the end plates of the nerves, but not in the muscle.

There is, however, some evidence that inhibition occurs, or can occur at least, in the muscle tissue itself. For the striated muscles of the vertebrates we know that the galvanic current causes a contraction only by the making and the breaking of the current, and that the making causes the contraction at the cathode, while the breaking causes the contraction only at the anode. Now, Biedermann (127) has found that in the bodies of some invertebrates, in organs with unstriated muscle fibres, and in the muscles of the heart, with the making of the current there is an inhibition at the anode, and with the breaking there is an inhibition at the cathode. That in

the striated muscles of the vertebrates only the contractions are noticed, and not the inhibition, has to be explained by the relaxed state of the muscle, which, of course, would not show the effect of inhibition. Biedermann (128) therefore has experimented with the veratrinized sartorius muscle of the frog, which shows a very slow relaxation after the contraction caused by stimulation. When a galvanic current was applied in this tonic state, it was found, indeed, that there was a rapid relaxation at the anode with the making, and a moderate relaxation at the cathode with the breaking, of the current. And as the same result was obtained when the animal was also curarized, and as curare excludes the possible participation of the end plate of the nerves, this experiment can be taken as a proof that the inhibition was taking place in the muscle tissue itself [Piotrowski (129)].

This is the place to mention the discovery of Gaskell (130), that stimulation of the peripheral end of the vagus caused a positive variation of the muscle current in the hearts of the tortoise and the crocodile, while stimulation of the accelerating nerves of the heart caused, as usual, a negative variation (131). Furthermore, Biedermann (132) found that in stimulating the nerve of the claw of the crawfish with such currents as cause an inhibition of the muscles, the muscle current showed a positive variation, while, when the stimulation was of such an intensity as to produce a contraction of these muscles, the action current consisted of a negative variation. These authors, therefore, maintain that there is indeed a causal connection between the contraction and negative variation on the one hand, and inhibition and positive variation on the other hand.

(To be concluded.)

THE TERM APPENDICITIS,

AND OTHER UNSCIENTIFIC WORDS OF OUR NOMENCLATURE.*

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ON a former occasion I promised to inform myself which word our Greek colleagues were employing for the term appendicitis, a term which is, naturally enough, an impossibility among Greeks. I wrote to Dr. Theodore Zaimis, of Patras, a prominent surgeon whom I had had the pleasure to see personally while visiting Greece. His answer is as follows:

Πάτρας, τῇ 20 2 Ἰανουαρίου, 1899.

Σεβαστὲ μοι Συναδέλφει,

Ζητῶν ἀναγγεῖν διὰ τὴν ἐπὶ μικρὸν βρωδιῶσαν ἀπατησίαν μου, ἐπιλοῦσθαι ἕνα ἀπαισιῶν μου ἐκ Πατρῶν, ἀπειδὴ ἐπανελθὼν εἰς μεταδωτο ἱστὴν πᾶν εἰχαίματος τας ἐξως πλῆμφορίας περὶ τοῦ ζητουμένου.

Ἐν τοῖς ἀρχαίοις συγγραφαῖς ἡ νόσος οὔτε περιγράφεται, οὔτε σαφὲς ὀνομάζεται. Ἡμεῖς χρώμεθα τοῦ ὅρου "περιτεφυλίτις," "παρυτεφυλίτις" καὶ "σκοληκοειδίτις" ὁ τελευταῖος ὅρος ἀπαποκρίνεται ἀκριβῶς εἰς τὸν ἰμέτερον "appendicitis," ὁμοίως ἡ appendix καλεῖται παρ' ἡμῶν "σκοληκοειδὴς ἀψύφοντις," ἐπειδὴ ὅμως κατὰ τὴν σκοληκοειδίτιδα συμπύκναι καὶ τὸ τυφλὸν ἰδίᾳ δὲ τὸ ὄρθως αὐτοῦ περιβλήμα, δηλαδὴ τὸ περιτόναιον, τοῦτον ἕνεκα χρώμεθα τοῦ ὅρου περιτεφυλίτις πολὺ σιγώτερον διὰ δὲ τῆς ὀνομασίας "παρυτεφυλίτις" ὁρλοῦμεν τὴν ἐπίστατον τῆς φλεγμονῆς εἰς τὸν συνδετικὸν ἰσθμὸν τὸν κατὰ τὴν εἰλεακὴν χώραν.

Εἰχαριστῶν ἀπὸ καρδίας τὴν εὐγενεστάτην δεσποινίδα Rose, εἰχομαι ἱμῖν τε καὶ τῇ δεσποινίδι, πᾶσαν εὐτυχίαν καὶ πᾶν ἀγαθόν.

*Ὅλος ἰμέτερος

Θεόδ. Ζαΐμης.

It reads in English: "Patras, January 2, 1899. My respected colleague. Asking pardon for my long delay in answering, caused by my absence from Patras, I hasten, as soon as I have returned, to give you with much pleasure the following information on the subject:

"The disease in question is neither described by the old authors, nor mentioned distinctly. We use the terms 'perityphlitis,' 'paratyphlitis,' and 'scolecoiditis,' the latter corresponding exactly with your 'appendicitis,' because the appendix is called by us scolecoides apophysis, but since during scolecoiditis the typhlon, and particularly the serosa covering it—namely, the peritoneum—are likewise affected, we use the term perityphlitis much oftener. By the term paratyphlitis we mean the extension of the phlegmonous process to the adjoining tissues in the iliac region," etc.

Before discussing the homely word appendicitis, I wish to say that I shall be obliged to the scholar, the student of classical philology, the Hellenist, who can point out in this letter of Dr. Zaimis's, or in the Greek translation of Niemeyer's *Pathology* (should read *Nosology*) and *Therapy*, or in Λοεκά Παταϊώων Ἀνατομὴ τοῦ Ἀνθρώπου, or in Zaimis's monograph Περί τῆς θεραπείας τῶν ἐν τῇ κοιλότητι τῆς κοιλίας καὶ τοῦ τυφλοῦ ἀπατησιῶν κεντέρων ἐξιντοκόκκων, which books I am placing here before you, or in any scientific medical work in the Greek language of to-day, a single word which is new Greek—that is to say, new Greek as most people erroneously imagine it to be. I shall reward him by exerting myself to hunt up a book which has been written, since the time of Luther, in pure, unmixed German.

There exists, indeed, a new Greek which merits all derision, because it is, as Hyrtl and others have called it, ridiculous, puerile, because it is silly; this is the Ἑλληνοφασίς language forced upon us by our own highly learned medical writers.

It is time that we began to feel ashamed of this idiom, which is a mockery of science; and indeed we are beginning to despise it.

There is in the forty-sixth volume of the *Deutsche Zeitschrift für Chirurgie* an article by Ludwig Herzog, entitled *Die Perityphlitis vom chirurgischen und*

* Read before the German Medical Society of the City of New York, April 3, 1899.

internen Standpunkte beurtheilt. Another paper by the same author, entitled *Behandlung der Perityphlitis*, which appeared in the *Zeitschrift für klinische Medizin*, Bd. xxxvi, Heft 3 u. 4, gives for the affection in question no other name than perityphlitis. Thus we see that there are writers in Germany who consider the term perityphlitis good enough. Recently the *New York Medical Journal* has substituted for appendicitis "appendicular inflammation," and I am sure a more correct term can not be found. Professor Küster, of Marburg, Germany, proposes the word epityphlitis. In order to construct this word he had first to construct a new anatomical term, namely, *ἐπιτυφλόν*, something upon the typhlon. Perhaps I am mistaken, but I never heard the appendix vermiformis called by that name.

From the Latin "appendix vermiformis" no name can be formed, and the German "*Wurmfortsatzentzündung*" would not be acceptable for international use; therefore it appears commendable to adhere to the terms of our Greek colleagues: scolecoiditis, perityphlitis, and paratyphlitis.

Some time ago Dr. Gerster called attention to the name scolecoiditis as the only correct one for international use, and it is the only correct Greek name for appendicitis.

While writing these remarks I have happened to see a treatise of Dr. Robert T. Morris's on appendicitis. As I did with other colleagues, I asked him if he would kindly support me in my proposition to purge our literature of the distasteful term. He answered:

"DEAR DR. ROSE: I quite agree with you that the word 'appendicitis' is an abomination, and I published a protest against it several years ago, suggesting the word 'cephyaditis' on the authority of Galen's use of *εφφάδης* for describing the appendix vermiformis. I should have used the word 'cephyaditis' in my book upon the subject, excepting for the fact that other words—'epityphlitis,' for instance—were being advocated, and it seemed best to wait for an agreement among authorities.

Yours truly,

"ROBERT T. MORRIS."

Linguistically there can certainly be no objection against either cephyaditis or epityphlitis; moreover, the name selected by Dr. Morris is to be preferred, in so far as it is formed from a word already existing in literature to describe the appendix vermiformis.

It would be to no great purpose, and I should hardly feel justified in occupying your time, if I were to confine myself to this *εφφάδης*, this *ερεσενσεν*, appendicitis, without calling your attention to faults of our nomenclature in general. Indeed, appendicitis serves me only as a starting point. I shall not enter into linguistic discussion, but mention only a few things which may prove of interest to every one of us practising physicians.

Virchow says: "Is it not the first attribute of a man of science that he should understand how to speak the language of science? The ability of the expert shows it-

self by nothing so much as by his correct application of technical terms. Nothing will make a more favorable impression for him, by nothing will he be of better service." Virchow thus speaks on medical nomenclature—strange to say, he calls it quite inharmoniously terminology—gives the reasons why scientific names are a necessity, and condemns the mania for inventing and arbitrarily coining new names.

Hyrtl, foremost of all others, complains of the arbitrary and unprincipled language of anatomy, and regrets that we are not able to substitute better names for those which are antiquated, faulty, and nonsensical. He says further: The fact that the attempts of Dumas, Schreyer, and Chaussier were hardly noticed and were not taken seriously did not encourage labors of this kind, and the main exertions of others to introduce proper names in place of the unscientific and silly ones only served to multiply the confusion in anatomical technical terms, inducing Schreyer, Pierer, and F. C. Lorenzo to create a new science—namely, an anatomical synonymy. He complains of the fashion of coining barbaric words for insignificant anatomical observations, and expresses the desire that we might unite for the purpose of purifying and improving the anatomical vocabulary.

When we read the prefaces of the different medical dictionaries we meet everywhere this complaint about barbarisms in our nomenclature. All attempts at correction thus far—even since Hyrtl—have been futile. On the variegated, the hybrid lexicology of the German Anatomical Society I have already pronounced myself several years ago; my remarks were published in the *New York Medical Journal*, and also in my book, *Christian Greece and Living Greek*.

And after all there exists a simple way, one that should most naturally suggest itself to every one of us, a way which surely will lead to success in substituting for barbarous, corrupt, or ill-chosen words, mostly supposed to be Greek, really good Greek words, and in doing away once and for all with hybrids like appendicitis which sound half Latin, half Greek. I confine myself here to Greek because this alone, or at least principally, is to be considered.

The language spoken and written to-day by Greeks of education, especially by men of science, is as pure, as unadulterated, unmixed Greek as the Greek of the most brilliant period of the classical ages. The Greek language of to-day can be compared with virtue. As virtue, and virtue only, is her own master—not, as are all other things, subject to the influence of fortune—so is Greek, and Greek only, of all European languages, her own master. Greek of to-day needs no foreign words for its completion, and the Greeks want no foreign words in their language. They are jealous of its purity, and detest, therefore, foreign admixtures. Whoever knows the history of the Greek of to-day can testify that barbarisms or linguistic monstrosities are an impossibil-

ity in the scientific medical literature of Greece at the present time.

This may sound strange to some who have accepted the misrepresenting traditions about new Greek, who know the Greek of to-day only from hearsay. But I have brought with me the proofs, nay, the conclusive evidence, of what I have said. Here we have a book, *Einleitung in die neugriechische Grammatik*, written by a true man of science, by a prominent philologist, a Greek of Crete, Ilatzidakis, professor in the University of Athens. It is written in German, dedicated to the author's German teacher, Delbrück, of the University of Jena, and professor of philology. The book gives the history of the Greek of to-day. Here we have also the three Greek books of which I have spoken already, the Greek translation of Niemeyer, the *Anatomy* of Papaioannis, and the monograph of Zaïmis. Any one who has learned Greek in school, and has not forgotten it, will be able to read and understand these books without difficulty, and, should he need a dictionary, his Greek school lexicon will suffice. I think a more conclusive evidence for my assertion can not exist.

Medicine, the science, can not deny itself, can not deny its history, can not give up the Greek and Latin names of her technical language, by means of which the scholars of all civilized nations possess a common, simple relation to each other. In order to have the nomenclature, which has become unscientific by the introduction of barbarisms, scientific again in regard to Greek terms, we have to adopt names which are in use in Greece to-day, and we should not accept a term purporting to be Greek which can not stand the test in Greece. In my book already quoted I have given extensively reasons for this necessity.

I have addressed myself to one of the German scientific journals, I think it was the *Deutsche medizinische Wochenschrift*, asking why the perfect Greek nomenclature of to-day was not taken notice of in Germany. The answer has been that they had reasons not to enter into the subject. Here we have the nigger in the wood pile!

The errors of a prominent man, as we all know from the history of Semmelweis, are sometimes more serious in their consequences than those of everyday people. I noticed Virchow's error in his inaugural address as rector of the University of Berlin in speaking of Greek as of a dead language, and I tried to direct his attention to this error, but no attention has been paid to my letter.

None of the medical lexicographers whom I know has even mentioned with one word the existence of a contemporary Greek nomenclature. This is to me incomprehensible.

I have written to the philological collaborator of a German medical lexicon to draw his attention to various forms of nonsense in the book, some of which is very learned; he answers that he had to leave some things

which were incorrect because the medical authority of the book forced him to do so. The receipt of this answer means to me progress, and I am indeed thankful to have received it.

I may be allowed now to produce some examples to demonstrate some of the nonsense existing in our nomenclature. It is not my fault if some comical elements may intervene. There we have first of all polielinie and polyelinie, the one spelled with i, the other with y. These words have caused a great deal of dispute; it has gone so far that one of the disputants has called the other *stultus*, although both were classical scholars, and after all they were both in the wrong—the word is neither polielinie nor polyelinie, but astyelinie.

I shall not lose much time with the word vaginismus for colicospasmus, or the word vaginitis for colpitis; these condemn themselves; but there exists another class of words which, although they seem to be correct so far as language is concerned, are nevertheless unscientific, and these words we should keep an eye on. The title-page of some text-books gives us such an example when it reads "pathology and therapy." I should like to know in what way therapy is related to pathology. It should read, as it reads in the Greek text-books, "nosology and therapy." On the first page of the text-book of Niemeyer we find the word pathogenesis. Now, if we knew everything that we don't know, we might perhaps allow this word to pass, although, used in the sense in which it is intended in Niemeyer's book, it would have no sense after all. In the Greek books of to-day it reads *Γένεσις τῆς Νόσου*. Pathogenesis as a word can not be found in any Greek lexicon. Horrid is it to call the cardiac orifice of the stomach cardia, and to call gastric pains cardialgia. This reminds me of the Irishman who had bronchitis of the liver.

There exists yet another class of words which have been coined at the expense of Greek, which are miserable counterfeits, however. One of these is the word hydrophobia. Lyssa, after a symptom attributed to it by laymen, is called in German *Wasserscheu*. Some German scholar translated *Wasserscheu* into Greek, and the world's literature accepted it. You would look in vain for the word hydrophobia as a synonym for lyssa in a Greek dictionary.

Not only in the nomenclature, but also in medical books and journals, alongside of real technical terms we notice the fashion of employing *ἑλληνισμοί* words, such as polypragmasia, which I see quite frequently in most elegant and otherwise scientific German writings. It is a miserable corruption of a Greek word. All of us who are able to think in two or more languages are well aware what arrant nonsense is promulgated when somebody who, for instance, knows English only through grammar and dictionary attempts to translate from his own mother-tongue—say German—into English. Exactly the same is the case in regard to Greek, if we know only how to read and to write, but can not think in Greek

—if we do not possess the Greek *Sprachgefühl*—and this our philologists, notwithstanding their indisputable profound learning, do not possess.

While in Athens I had some conversations about medical nomenclature with several professors of the University of Athens; some of them were philologists, some were medical men. The unanimous opinion was that the errors could not be corrected and the matter finally settled until an international commission with headquarters in Athens was called together. I wrote of this to some prominent professors of classical philology in Germany, and one of them, an exceptional man, who, on account of having been living in Greece for years, is mastering living Greek, answered: "I agree with you that future barbarism will be prevented if an academy (*accademia della crusca*) is established, which, so far as my opinion is to be considered, should consist of Greeks only for the Greek words." He complains that the chemists, with their terrible new formations of word monsters, are much worse than the physicians.

Chemistry and medicine are not scientific so long as they teach something which has proved to be false, which is unscientific; and false and unscientific is the medical technical language employed by us this very day. The criticism of chemical lexicology I shall leave to the chemists.

It is positive that our nomenclature, so far as the terms which purport to be Greek are concerned, will remain in gross contradiction to science so long as malevolence and error in regard to the Greek of to-day exist among us.

ON THE USE OF THE VALERIANATES OF CREOSOTE AND GUAICOL IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

By A. B. BRIGGS, M. D.,

ASHAWAT, R. I.

THE general practitioner is at all times confronted with cases of acute and chronic tuberculosis, the treatment of which often exhausts his utmost resources. The days when the physician could prescribe cod-liver oil or the syrup of the hypophosphites and rest content while the patient passed downward and onward to the fatal termination of the case have, happily for the patient, passed; with our better understanding of the etiology and pathology of the disease gained during the past fifteen or twenty years, we have been able to make great advancement along the lines of prophylaxis, and, until some more satisfactory treatment is presented to the profession than is at present available, it is our duty to work along the line of prevention for our most solid results, rather than by the medicinal treatment.

Still, as stated above, we are all at times brought face to face with cases of consumption that require our immediate attention and treatment—patients who of necessity must remain at home; who can not take advantage of climatic treatment.

It is not the intention of the reader to present to you to-day a paper on the treatment of phthisis, but rather to call your attention to the use of creosote and some of its derivatives in the treatment of the disease.

During the past ten years or more the number of new remedies and modes of treating tuberculosis have been almost innumerable; most of them, after a fair and impartial trial by the profession, have failed and been discarded. Creosote, or some of its preparations, has been prescribed during this period perhaps oftener than any and all other drugs, and its use has become so inseparable from the treatment of pulmonary tuberculosis that by some it has been classed almost as a specific, although improperly so.

I will not weary you with an attempt to describe its mode of action in the human economy; suffice it to say, it would appear that creosote and its various preparations and esters have no specific action on the bacilli themselves, or on their toxine-producing powers, but act rather in the alimentary canal before their absorption, and after their absorption, by favoring the elimination of the toxic albumins with which they combine. Again, the drug is eliminated largely by the bronchial mucous membrane, and thus by its local action upon the bronchial mucosa, and by its stimulating effect, the resisting power of the cells is increased and its well-known power as an expectorant accounted for.

The value of creosote as a remedy in tuberculosis is conceded by all, but its administration in sufficient doses to obtain beneficial results is often defeated by the patient's inability to take and retain it in the stomach. On this account, and also on account of the physician's inability to always obtain a chemically pure drug when prescribed, compounds of creosote and its principal constituent, guaiacol, have more often been administered.

My attention was called less than a year ago to two new esters of the drug creosote—viz., creosote valerianate (eosote) and guaiacol valerianate (geosote). Since that time I have prescribed them whenever creosote or guaiacol has been indicated, and it is to their use in the treatment of tuberculosis that I wish to call your attention to-day.

I will not refer to their chemistry in this paper, as time will not admit (besides, most probably, all of you are familiar with them), but shall beg your indulgence while I relate a short history of several cases treated during the past six or eight months.

CASE I.—Miss B., aged eighteen years, American. About May 1, 1898, gave the following history: She has never been considered strong physically, although her condition since early childhood has required the attend-

* Read before the Washington County, R. I., Medical Society, January 12, 1899.

ance of a physician but a very few times. About two years ago she was taken with a severe pain over the region of the right ureter, which continued for about four hours; this was followed by a great amount of soreness and tenderness for ten days, during which period the urine at all times contained blood. There were no febrile symptoms present, nor were there any symptoms referable to the bladder. She had a number of these attacks during six or eight months, always accompanied with blood in the urine. Her weight during this period was about one hundred and ten pounds; menstruation normal, complexion pale, anemia very pronounced. Under a general tonic treatment there was satisfactory improvement, and she had no more attacks of pain or hematuria for about nine months.

In December, 1897, there was a return of the pain in right side, with bloody urine; at this attack she complained of pain after urinating, and a desire to void the urine every hour or so. From this time until about April 1, 1898, the pain in the side gave her very little trouble, but the bloody urine continued almost daily. During this period there was a continuation of the pain over the region of the bladder, most marked after urination, with constipation, loss of appetite, and increased anemia. The patient was evidently losing flesh. Examination of the urine gave the following results: Specific gravity, 1.018; reaction, acid; albumin present; no sugar. Microscopic examination showed numerous leucocytes (pus corpuscles) in every field, with, occasionally, epithelial cells from deeper layer of the bladder or ureters, some of the epithelial cells being granular. Blood-corpuscles were present. No casts or crystalline deposits were found. About this time and subsequently up to April 1, 1898, very careful and repeated examinations of the bladder with a sound failed to reveal the presence of stone. Daily washing out of the bladder with a warm solution of boric acid reduced the pain in a marked degree; the frequency of urination became less, and there appeared to be less blood and pus in the urine; but all this time the appetite remained poor, and the patient lost weight, which on April 3d had declined to eighty-five pounds.

On April 1st it was noticed that a slight cough had developed, with expectoration, and on April 13th she had a slight hemoptysis, followed by a more severe attack on the 14th. Physical examination a few days later showed marked emaciation; pulse, 100; respiration, 24; temperature, 99.5° F. There was slight catarrhal trouble, with crackling râles over the upper lobe of the right lung, with flatness at the same point; the flatness was also noticed over the lower lobe of the right lung; very marked tenderness over the region of the right kidney and along the tract of the ureter on the same side; no tenderness over the bladder. There was cough with a surprising amount of mucopurulent expectoration, which, upon microscopic examination, showed the presence of tubercle bacilli in great numbers. A few days later a microscopic examination of the urine exhibited the tubercle bacilli in that excretion also.

On April 20th, notwithstanding the undoubted inevitable fatal termination in this case, the patient was given creosote in three drop doses every six hours, always after taking food, and on the 23d the dose was increased to six drops four times a day.

May 14th, the patient reported her mind better than at any time during the past year, and food was well digested; cough was less troublesome and expectoration was diminishing in amount; there were no more attacks

the patient stated that she slept very much better; she felt stronger and walked out of doors for half an hour. The blood and pus still continued in the urine, in which the aromatic odor of the drug was very pronounced. There was much less pain accompanying micturition, and the desire to void urine was less frequent. From about this time on, the patient gradually lost ground and died on the 12th of June, of inanition.

This was undoubtedly a case primarily of tuberculous nephritis, the deposit gradually extending by way of the left ureter to the bladder, and terminating in tuberculous inflammation of the lungs, or pulmonary phthisis.

The points of interest in connection with this case are: The marked amelioration of the most prominent symptoms soon after the administration of the creosote was begun, as shown by the improvement in the cough, with decrease in amount of expectoration; a complete cessation of night sweats; a marked decrease in the nervous symptoms, and consequently increase of refreshing sleep; and the almost magical disappearance of the morbid frequency of passing urine and bladder tormina.

CASE II.—Mr. G., American, thirty-five years of age, always healthy, no consumption in family. Wife died of phthisis pulmonalis about two years ago; had noticed for six months or more before his wife's death that he had a slight cough and did not feel as well as usual. On May 1, 1898, he presented the following history: He had been sick for over two years and unable to do manual labor for the past year; there was a severe cough with profuse expectoration of a frothy mucopurulent nature; the appetite was poor, with inability to digest and assimilate food; there was constipation alternating with diarrhoea; sleep poor; urine scanty and high-colored; had lost about sixty pounds in weight during past two years. Physical examination gave a dull percussion resonance over a large part of the right chest and the upper lobe of the left lung, accompanied with crackling and moist râles over the apex of both lungs; bronchophony with bronchial breathing and increased vocal fremitus. Microscopical examination of sputum showed the presence of tubercle bacilli. Was given six drops of creosote three times a day after meals with a twentieth of a grain of nitrate of strychnine before meals and at bedtime. June 1st he reported that he felt very much better; took more food, which was better assimilated; the cough less, with amount of expectoration about the same; he went out of doors every day, and had gained five pounds in weight; temperature, 99° F.; pulse, 80; bowels moved every day. Continued treatment.

On July 10th he reported continued improvement; had gained eight pounds; cough and expectoration very much less; night sweats had stopped; he took a liberal amount of food, which was well received by the stomach; had not vomited once during the past three weeks. Treatment continued.

During August the patient had an acute otitis media purulenta of the left ear, of tuberculous nature, and in September the same condition of affairs presented on the right side, necessitating a perforation of the drum membrane of both ears, with considerable impairment of the hearing. With the exception the patient's improvement continued up to October, 1898.

CASE III.—A young man, American, twenty-one years of age, gave a history in May, 1898, of having

been in failing health since the August preceding. He has had during the past ten months five attacks of hæmoptysis, not severe, but each extending over a period of four or five days. In December he complained of poor appetite; food was received quite well, but he had a feeling of a hard lump in the stomach for two hours after each meal; there was pain in right side and back over the lower part of the lung; he was anæmic; there was cough with expectoration and night sweats. Present weight, one hundred and fifty pounds; a year ago he weighed one hundred and seventy pounds. Pulse, 90, increased to 110 a minute on full inspiration; temperature was 99° F., with evening pyrexia. Physical examination showed a marked bronchial catarrh, limited to the two lower lobes of the right lung, with a decided imperfection of the respiratory murmur at the apex of each lung, and a slight presystolic murmur over the heart. Microscopic examination of expectorated matter showed the presence of tubercle bacilli.

The patient was ordered Bland's tonic laxative pills in ten-grain doses before meals; geosote, six drops, three times a day after meals, with nourishing food and outdoor exercise. In June he reported feeling much better; food was received well; he gained three pounds in weight; the cough was better, with less expectoration. He had one slight attack of hæmoptysis that lasted for two days; night sweats with evening febrile attacks had subsided; the pulse 80, temperature normal. He was told to continue the treatment. The improvement in this case continued, and in September the Bland's pills were discontinued. An examination of the sputum in October did not show the tubercle bacilli present.

The patient continued to improve and in December had gained seventeen pounds in weight; the cough was of little or no account, expectoration nil. A physical examination showed the chest symptoms markedly improved, although the heart murmur was still present and some pain was complained of in the side. He was still taking the geosote in six-drop doses three times a day.

CASE IV.—Miss F., American, twenty-one years of age, consulted me in April last. She had always been well until some time in January last when she contracted a severe cold which left her with a cough that has continued since. In March she had an attack of hæmoptysis, which was repeated in two days. At the time I first saw her, she reported that her appetite was good, and that food was received well, but that she had been losing flesh for the preceding two months. Emaciation was not marked; pulse 110, with decided evening pyrexia and night sweats. There were cough and sore throat with hoarseness every night and during the early morning, and pain through the back and right supraclavicular region. The expectoration was of a frothy muco-pus, of limited amount, and on microscopic examination showed the presence of tubercle bacilli. Physical examination gave slight dullness over the upper lobe of the right lung. The remainder of the chest seemed normal by percussion. On auscultation the respiration was found to be weaker and wavy in the right supraclavicular region, accompanied by marked crackling râles and bronchial breathing. I ordered eosote in six-drop doses after each meal and at bedtime, together with outdoor exercise and a supporting treatment. Improvement began within ten days and continued uninterrupted. The patient continued to take the eosote until about September 1st, when it was stopped. She has remained perfectly well since, about five months,

having gained twenty pounds in weight. A physical examination made within the past six weeks failed to reveal anything abnormal about lungs.

I have at some length reported four cases of tuberculosis treated with the eosote and geosote, and in this connection wish to speak of five others that have been under treatment at the same time, or are under treatment at present. Of these five, two were incipient cases, one of the patients having fully recovered, no symptoms having returned during the past three months, and all treatment has been discontinued during that time. The other patient is at present under treatment and has shown great improvement since the eosote was first administered, about October 1, 1898. The other three were chronic cases. Two of the patients have shown marked gain, while the third has lost ground.

To recapitulate: We have eight cases, three of incipient tuberculosis and five chronic cases. Of the three acute cases, two of the patients have made, to all appearances, complete recoveries. The third, still under treatment, is fast recovering and bids fair to result in a final cure.

Of the five chronic cases, one patient has died, three have improved, and the fifth, although showing no improvement, nevertheless has received benefit from the drug, as a lessened amount of cough and expectoration, together with a decrease of night sweats and other troublesome symptoms, is proof conclusive.

All the patients in the chronic cases are still taking the valerianates, for they recognize the fact that as soon as they discontinue them they get worse, and by their continued use they are able to at least hold their own against the disease, while two of them are able to follow their vocations.

It is an acknowledged fact that no remedy or treatment thus far established or instituted has been able to cure advanced cases of tuberculosis; it is also probable that more cases of the disease have been benefited by the administration of creosote, guaiacol, or some of their preparations during the past thirty years than by all other medicines combined, and this notwithstanding the great difficulty the profession has experienced in procuring a pure article when prescribing it, and the patient's inability to take it in appreciable doses. These objections are wholly obviated when the eosote or geosote is administered, and from my experience with their use during the past year I can say that in any and every instance where creosote is indicated we are safe in prescribing the valerianates.

The esters are both easily soluble in alcohol or ether, have the nutty aromatic odor characteristic of valerianic acid, and if given in the liquid form are best administered in alcohol, combined with essence of peppermint or oil of cinnamon. Both the drugs may be procured in capsules, coated with sugar, which is perhaps the ideal form in which to administer them. The writer has often prescribed the eosote and geosote in glycerin, with the

directions to shake well and administer in milk, and has found it a very satisfactory way to exhibit the drugs to children.

From my experience in the use of geosote and cosote I would suggest the following points for your consideration:

1. The cosote or geosote may be given with advantage in all cases of pulmonary tuberculosis.

2. It is non-toxic and non-irritating. The dose is very much less than that of creosote, from three to ten drops being as much as is ever required at a dose. From ten to thirty minims daily can be given with benefit in these cases.

3. The remedy always acts as a tonic; the appetite improves, dyspeptic symptoms subside, the patient increases in weight, the cough, expectoration, night sweats, and physical symptoms improve, while the disposition to hæmoptysis seems to be entirely under control.

4. On account of their disinfectant properties, fermentative conditions in the stomach and bowels, so often present in these cases, respond very readily and favorably to their use. Tuberculous enteritis, if present, is benefited, and self-infection prevented.

5. The well-known sedative action of the valerianates is soon demonstrated after their administration, as shown by their beneficial action on the various nervous symptoms, frequently so pronounced in these cases.

Therapeutical Notes.

A Vermifuge Powder for Children.—Dr. Albert Veillard (*Journal de médecine de Paris*, April 9th) gives this prescription for the destruction of round worms and threadworms:

R Calomel 3½ grains;
Santonin 14 grain;
Powdered sugar of milk 15 grains.

M. The whole to be given in the morning, before breakfast, in a coffee-spoonful of honey, to a child about four years old.

Hæmalbumin in Chlorosis and Anæmia.—Dr. Goliner (*Deutsche Medicinal-Zeitung*) recommends hæmalbumin for the relief of chlorosis, anæmia, and gastric and intestinal catarrhs. An effective iron preparation, provided it contains nutrient material in a predigested condition, especially albuminates, whose absorption and assimilation require no tax upon the digestive system, is the treatment *par excellence*. Such a preparation of iron is found in hæmalbumin. It is a powder readily soluble in hot water or alcohol, and contains all the salts and albumins present in the blood, i.e., hæmoglobin with hæmatin, serum albumin, and paræalbumin, in the form of albuminates. Therefore, hæmalbumin closely resembles fresh blood in its composition, the fibrin alone being absent. The iron effects of the hæmatin, together with the nutritive influence of the albuminates present in this preparation, when administered

in appropriate cases, are promptly manifested. The dose of hæmalbumin is fifteen grains three times a day. —*Medical News*, April 15th.

A "Shotgun" Prescription for Constipation.—At a recent meeting of the Paris Society of Therapeutics (*Gazette hebdomadaire de médecine et de chirurgie*, April 6th) M. Bardet spoke highly of the following complex formula, laying stress on its unirritating character and the gentleness and thoroughness of its operation:

R Cassia pulp, {	each	900 grains:
Tamarind pulp, }		
Mannite	1,200 "	
Sodium phosphate	900 "	
Hydrated magnesia	1,050 "	
Senna	600 "	
Washed sulphur, each	300 "	
Jalap,		
Scammony	150 "	
"Leplandin" [Leptandrin?]	9 "	
Baptisin	3 "	
Euonymin	30 "	
Podophyllin	90 "	
Amorphous quassin	30 "	
Extract of <i>Rhamnus cathartica</i>	120 "	
Extract of <i>Rhamnus frangula</i>	30 "	
Extract of cascara	300 "	
Extract of nux vomica, {	each, 3 "	
Extract of belladonna, }		

M. From forty-five to ninety grains for a dose, to be taken in wafers.

Protargol in the Treatment of Superficial Epithelioma.—In a pamphlet entitled *De l'emploi du protargol dans le traitement des plaies, ulcères variqueux, ulcérations syphilitiques et herpétiques, épithéliomas de la face, etc.*, Dr. Philippe Valençon, of Paris, reports two cases of superficial epithelioma of the face treated with protargol, which he considers has a manifest superiority over other topical applications. Cicatrization ensued in both cases, but the author says time must elapse before they can be said to have been definitively cured.

For Infantile Colic.—The *Riforma medica* for April 27th ascribes the following to Condie:

R Extract of hyoscyamus 3 grains;
Calcined magnesia 18 "
Powdered ipecacuanha 1½ grain.

M.

Make into ten powders. One to be taken every three hours.

The Administration of Trional. Dr. Habermann (*Centralblatt für Therapie*, 1898, p. 156; *Gazette hebdomadaire de médecine et de chirurgie*, April 30th) recommends the administration of trional in Seltzer water. According to him, this mode of exhibition has as advantages ease of solubility, agreeable taste, and rapidity of action, sleep supervening in about ten minutes. There are no unpleasant after effects.

A Spray for Urticaria.—The *Settimana medica* for April 29th ascribes the following to Gauchon:

R Alcohol, {
Chloroform, } of each 150 grains;
Sulphuric ether, }
Menthol 150 "

M.

To be used with an atomizer

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THE MEDICAL INSPECTION OF PUBLIC SCHOOLS.

PROBABLY there are few municipalities in the United States in which there is any medical supervision of the public schools that can be called systematic or that is even moderately efficient. In New York we now have regularly appointed medical inspectors of the schools, acting under the authority of the board of health. They form a numerous corps, and we do not doubt that their efforts, poorly paid as they are, accomplish much in preventing the spread of infectious disease. We should like to see a better-paid body of medical men engaged in this work, but we fear the time is not very close at hand when an ideal service will be in operation. The importance of such a system of inspection is forcibly pointed out by Dr. Francis Reder, of St. Louis, in the *Medical Record* for May 13th.

Incidentally, Dr. Reder treats briefly of school hygiene, and what he has to say on that subject might well be urged upon the attention of teachers and school boards. But the main purport of his article is a sketch of the work that should be done by a medical inspector of a public school if it is to be as efficient as it might be. He would have the school visited daily by the inspector, and each of the children subjected to a physical examination in the presence of the principal or a representative, but we take it that he does not mean a thorough examination of every pupil daily, for that would be wholly uncalled for and, in the case of a large school, impracticable. A daily look at them by an acute and experienced inspector would probably be sufficient. He could readily single out those whom it would be desirable to examine minutely. Doubtless it is such a course as this that Dr. Reder has in mind. Of course there should be one rigid examination of each new pupil.

Dr. Reder judiciously remarks that it would be no part of a medical inspector's function to prescribe for the children or to offer advice, except such as might have a direct bearing upon the course to be pursued from the point of view of the general welfare. He should, however, in the case of any departure from perfect health, if of an acute nature, take measures to arrive at an accurate diagnosis as soon as possible, report all suspicious cases at once to the principal, to

the board of health, and to the child's parents, and keep a record of his work, to be summarized in the form of a monthly report. It is to be hoped that Dr. Reder's article will be extensively read and well pondered, for his recommendations are of the utmost importance.

LUXURY AND HOSPITALS.

THE perusal of the annual report of a certain hospital gives rise to some reflections in regard to luxury in hospitals. It is well known that the out-patient departments of hospitals, polyclinics, etc., however necessary they may be, not only in regard to the public but also for the continuous training of the medical profession, are nevertheless a source of grave misgiving to the general practitioners in consequence of their abuse by persons who ought really to pay a medical man for their treatment.

A decent living for the average medical practitioner is only obtainable by a process of "taking the rough with the smooth." If he is only to be employed in attending serious and bedridden cases, especially when much of his practice lies among people of limited incomes, then he gets only the "rough" end, and his life will be unusually arduous and by no means adequately remunerative; for people of that class can not and do not pay adequately in their more serious diseases to make up for the little advantage that would otherwise be gained by attendance on them in their minor ailments in the out-patient departments. Deducting the very poor, who are fit subjects for gratuitous treatment in hospitals, and who in any case are only a tax upon that charitable sense of duty to humanity which probably obtains to a larger extent among the members of the medical profession than of any other, the remainder of the population may be divided into those who can "pay their way" in medical matters, save perhaps in the presence of some overwhelming calamity, and the really well-to-do and wealthy. We have seen that the more profitable portion of the physician's work among the former class is being seriously encroached on by the abuse of the out-patient departments. A perusal of the report before us suggests the reflection that among the well-to-do also the physician's interests are in danger of being sapped by the system of pay wards in hospitals. The inspection of the very admirably executed pictures of private rooms, fitted up, as it would seem, with such luxury as to suggest that they are residences in some very expensive apartment house, prompts the question as to whether the people who could afford to pay for such luxurious surroundings are fit persons to be receiving gratuitous treatment in a hospital—for we pre-

sume that the medical treatment is unremunerative so far as the physician personally is concerned. But even if it were not, even suppose the patient who could afford to take advantage of such luxurious accommodation as is depicted in this report were to pay fees to the hospital physician in attendance, is not that to place the hospital physician in a position of undue advantage against the ordinary practitioner?

It seems to us that the accommodation of pay wards in general hospitals should be confined within such limits as would attract only the many inadequately homed workers whose surroundings are such that they could not possibly receive efficient care in their homes, and from whom the expense of provision of the few really essential comforts would take away the pecuniary capacity to adequately remunerate the doctor. A much greater amount of such pay wards as would aid this class would undoubtedly be a great acquisition to the community. But we think that the existence of pay wards framed on such a luxurious scale as those shown in the report referred to, while very advantageous, even to the wealthy, on the ground that nearly all sickness is best away from the home, should not be provided in general hospitals, but should be confined to private nursing institutions, of which we should like to see a good many established, with an adequate nursing staff and adequately found, but without any staff of medical attendants, save perhaps one or two internes, attached. This would make it incumbent on the patient who is in a position to obtain such luxurious accommodation, which even in these hospitals might with advantage be graded, to retain any physician whom he might desire to employ, to take charge of his case in the usual manner. By this means, instead of being a serious menace to the medical profession, pay wards would become a valuable and welcome auxiliary thereto. The public would be benefited, and the medical profession would not be placed at a disadvantage.

We wish emphatically to say that these remarks are not intended to be a criticism upon the particular excellent institution referred to, for there are doubtless many others in the United States to which they would equally apply; but they are directed against a system, apparently on the increase, which bids fair, as it seems to us, to still further augment the already too heavy burdens, financial and otherwise, of the medical profession at large.

THE MICRO-ORGANISM OF CANCER.

THERE has been much diversity of views as to the causation of cancerous growths. On the whole, the doctrine that malignant tumors are infective, and that they

are due to a specific micro-organism, has apparently been gaining ground. A powerful impetus has lately been given to it by certain Italian investigators, notably Sanfelice, whose experiments with a blastomyces to which he has given the name of *Saccharomyces neoformans* are summarized in a most interesting manner by Dr. William Russell, of Edinburgh, in an article published in the *Lancet* for April 29th.

It seems that in 1890 Russell himself found in cancerous growths certain micro-organisms, as he regarded them, which he was inclined to look upon as sporozoa, but to which he gave the provisional name of "fuchsin bodies." They were afterward found by a number of other observers, but Russell's view that they were the specific cause of cancer was not accepted. He, however, has continued to hold it, and it must be gratifying to him to find that Sanfelice finds "fuchsin bodies" constantly formed in the growths brought about in his inoculation experiments, and regards them as an evolutionary form of his *saccharomyces*.

Sanfelice's inoculations of guinea-pigs with the *saccharomyces* resulted in general infection, with the formation of tumors consisting partly of masses of the parasite and partly of proliferation of the cells of the part. The infection spread by the lymphatics and the blood-vessels without causing inflammation. The animals usually died within a month. In mice, inoculation led to rapid infection, with great multiplication of the parasite. In white rats the process was slower. In rabbits, it produced death in only two out of twelve inoculated, but in those that died, although the parasites were fewer in number, there was more proliferation of tissue elements than in the other animals. In his experiments on dogs Sanfelice used a form of the parasite obtained by passing it through a number of dogs, inoculating them with it and recovering it from the lymphatic glands. The tumors produced showed the typical structure of adenocarcinoma, and such clinical features as retraction of the nipple were observed. Sanfelice's observations have been to a great extent confirmed by Roncoli, and it appears as if we were on the verge of general recognition of the *Saccharomyces neoformans* as the germ of cancer.

THE LIVERPOOL SCHOOL OF TROPICAL DISEASES.

We learn from the *Lancet* for April 29th that the Liverpool School of Tropical Diseases was formally opened by Lord Lister. This school took its inception in November last from the offer of Mr. Alfred L. Jones, of the West African shipping firm of Elder, Dempster, & Co., of the sum of £350 a year as an endowment. The scheme was promptly and warmly taken up, the Royal Southern Hospital and University College, Liverpool, being associated. The attendance at the inaugural din-

ner constituted a brilliant assemblage. This is the first school to be established in England for the study of the diseases peculiar to tropical countries, an idea which emanated from the advocacy of Mr. Joseph Chamberlain. The present home of the school is a floor in the Royal Southern Hospital, including a twelve-bed ward, an extensive laboratory for blood and other examinations, with the apparatus necessary. Major Ronald Ross, of the Indian Medical Service, has been appointed special lecturer, and his lectures are to be illustrated by diagrams and lantern slides with reference to cases in the ward. All the twelve beds were full, the nationalities of the patients representing China, India, the United States, Norway, Sweden, Russia, Finland, England, and Ireland; while the diseases had been variously contracted in Java, India, Brazil, Savannah, South Carolina, and Sierra Leone, Farcados, Old Calabar, Benin, and Cape Coast Castle, the last five places being on the west coast of Africa. It seems to us about time, in view of our increasing relations with tropical countries, that some steps were taken toward some similar institutions at the larger seaports in this country.

CONTEMPLATED UNION OF MEDICAL COLLEGES.

We learn from the *St. Louis Medical Gazette* for May that there is a prospect of the consolidation of the Missouri and St. Louis Medical Colleges, to which rumor adds that the Marion Sims and Beaumont Colleges of St. Louis are contemplating a similar action. We trust that these reports will prove to be true. There has been such an excessive wave of college founding in the past that a movement for reducing their number is a healthy reaction. The only conceivable advantage to any one of this multiplicity of colleges is the supply of a large number of professorial chairs for aspiring practitioners, while their general disadvantages are manifold and serious.

THE UTILIZATION OF TOWN REFUSE.

ACCORDING to the *Medical Review of Reviews* for April, Lord Kelvin and Professor Archibald Barr have made some very interesting experiments in Edinburgh, Bradford, and Oldham on the disposition of town refuse. Damp asphalt refuse containing fecal and vegetable matter was consumed without any trace of smoke, and the steam produced by the destruction of these products was used to drive electric light and other machinery, and that without the admixture of either coal or coke. Lord Kelvin's report should prove of great assistance in solving one of the most serious problems attendant upon the congregation of men together in limited areas—viz., the proper disposal of their refuse. Apparently, Lord Kelvin has found a way not only of disposing of it, but actually of doing so to advantage.

PRIMARY EPITHELIOMA OF THE UVULA AND SOFT PALATE.

PRIMARY malignant disease of the uvula and soft palate is held to be very rare, whence the observations of Mr. Lennox Browne (*Scottish Medical and Surgical Journal*, March) are of considerable interest. He reports two cases, in the first of which the growth formed a warty mass with all the characteristics of epithelioma. The tumor was removed and the patient remained well for many months, but finally died from recurrence in

the cervical glands. Microscopical examination proved the character of the growth. This patient had a bad family history, both father and mother having been subjects of malignant disease. In the second case the left anterior faucial arch was the primary seat of the disease. In this instance also, microscopical examination confirmed the correctness of the diagnosis. As Mr. Browne aptly points out, considering the number and variety of benign neoplasms found in the uvula and its neighborhood, there can be no reason why this region should be specially exempt from malignant disease, and he suggests that such a condition may not really be so uncommon as it is thought to be. It is noteworthy that in neither of Mr. Browne's cases were the cervical glands affected, as would almost certainly have been the case had the disease been an extension from the tonsil.

THE CONSUMPTION OF COFFEE IN THE UNITED STATES.

THE *Medical News* for May 13th says that the average annual consumption of coffee in the United States during the decade 1870 to 1880 was 792,000,000 pounds; in the next decade it was 1,326,000,000; while in 1898 it was 1,580,000,000. This enormous increase in the use of this stimulant the *Medical News* considers to be another indication of the high-tension life we are leading nowadays. We are not told, however, that this increase is out of proportion to the increase in the number of people to use coffee. There are a few more people in the United States in 1898 than there were between 1870 and 1880, or even between 1880 and 1890; and it might well be found on inquiry that the amount of coffee consumed by each individual is not so much in excess now of that consumed in earlier times.

A SO-CALLED "KOCH LUNG CURE" UNDER INVESTIGATION.

ACCORDING to the newspapers, the city board of health is about to inquire into the practices of a concern calling itself the Medical Council and Koch Lung Cure, which has its headquarters in New York, but appears to have branches in Chicago, Philadelphia, and Boston. The allegations against the concern are of grave violations of law. The institution is, of course, one about which the medical profession knows nothing, one with which it seems hardly possible that reputable medical men can have anything to do.

FRICTION SOUNDS AND MURMURS.

M. H. SOULIER (*Lyon médical*, April 30th), in a communication to the National Medical Society of Lyons in support of the view, which is denied by many, that pericardial friction can produce a murmur, cites the following experiment: If the palm of the left hand is placed over the left ear, and the back of the hand is rhythmically scraped with the finger nail, a friction sound will be heard. But if in place of the nail the pulp of the finger is used, moving it with sufficient rapidity, and rhythmically like the action of the heart, the resemblance between the sound produced and a double cardiac murmur will be complete. Moreover, a circular in place of a to-and-fro movement of the finger, bearing a little harder at corresponding intervals, will reproduce the sound of a continued murmur with reduplication. This experiment, M. Soulier thinks, should

convince even the most skeptical that if the pericardium is dulled and dry from any cause, not necessarily inflammatory, a murmur may be engendered thereby; from which he infers that inorganic murmurs are probably due to pericardial friction. This roughening of the membrane, he considers, may be produced by exaggerated cardiac impulse. The correctness of his experiment is easily demonstrable to each person by himself, and certainly seems to lend color to the author's opinion on this disputed point.

THE LEGAL STATUS OF FAITH-CURE PRACTICE.

It is rumored that in some way the city board of health is meditating cooperation with the county medical societies in steps to be taken to check the business of the "healers," on the ground that they are practicing medicine without a license. It seems to us perfectly feasible to enforce the law among them, and the bounden duty of the authorities to do so. At the same time, we trust that all care will be taken to avoid any semblance of persecution.

THE RÖNTGEN RAYS IN THE TREATMENT OF ECZEMA.

If the use of the Röntgen rays for diagnostic purposes is to continue to involve the danger of occasional severe results, it is some consolation to learn that their employment has been found useful in the treatment of eczema. Mr. C. Thurstan Holland, M. R. C. S., of Liverpool (*British Medical Journal*, April 29th), reports a case of chronic eczema of the back of the hand in which seven exposures of fifteen minutes each, at intervals of several days, resulted in a cure.

BLOODY SEMINAL EJACULATIONS.

It must not be hastily concluded that emissions of bloody semen are indicative of spermatoecystitis, as is pointed out by de Keersmaecker (*Centrallblatt für die Krankheiten der Harn- und Sexual-Organen*, x, 3; *Monatshefte für praktische Dermatologie*, May 1st). His investigations show that in the majority of cases the blood comes from the prostate, but in acute inflammatory conditions its origin can not generally be ascertained with precision.

TUBERCULOUS DISEASE OF THE PUBIC BONES.

At the recent congress of the German Society of Surgery (*Wiener medizinische Blätter*, April 25th) Dr. von Büniger, of Hanau, declared that we knew next to nothing about this disease, and perhaps he was right. He gave the history of a case in which, after the diagnosis had long remained obscure, the tumor broke down under characteristic tuberculous ulceration. Resection of the affected bones is the only remedy, he says, and for that operation he prefers a curved incision above the pubes. The prognosis as regards life is good, and in his case the power of walking was regained.

ITEMS.

The Surgeon-General on Camp Typhoid.—At the recent meeting of the Association of American Physicians, according to the *Medical News* for May 13th, the Surgeon-general made some very pertinent remarks when

speaking to a paper by Dr. V. C. Vaughan On Typhoid Fever among the American Soldiers in the Recent War with Spain.

Dr. Sternberg said that it was certainly discouraging that after the lessons of the civil war we should have had a repetition of camp infection by a disease that we recognized as due to filth. He had hoped for better things, and that the profession in general would more fully appreciate the dangers, and he issued a sanitary circular describing the means of avoiding such an infection. The line officers, he said, were many of them inclined to consider all talk about cleaning the camp, about flies carrying infection, etc., as a fad of the doctors, and would not recognize danger until the epidemic had occurred. He was afraid that the doctors also throughout the country did not pay as much attention as they should to the sterilization of the excretions from typhoid patients, and these were the doctors that made up our regimental surgeons. Typhoid invaded practically all the camps, even those in northern States, where the regiments never left the home camp. He could only hope that the results of this war might be impressed upon the profession, and that we might devise some way of avoiding similar disasters in the future.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending May 13, 1899:

DISEASES.	Week ending May 6		Week ending May 13.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	16	6	26	6
Scarlet fever.....	204	17	171	11
Cerebro-spinal meningitis.....	0	8	0	9
Measles.....	332	14	377	18
Diphtheria.....	171	28	175	26
Croup.....	1	3	12	6
Tuberculosis.....	165	192	199	161
Small pox.....	2	0	1	0
Chicken-pox.....	34	0	37	0

The Fifth District Branch of the New York State Medical Association.—The fifteenth annual meeting will be held in Brooklyn on Tuesday, May 23d, under the presidency of Dr. Joseph D. Bryant. A discussion on malignant disease will be opened by the president's address, after which the following papers will be presented: The Nature of Malignancy in Neoplasms, by Dr. Edward K. Denham; Malignancy in the Female Genito-urinary System, by Dr. L. Grant Baldwin; Remarks on Malignant Disease of the Nose and Throat, by Dr. Jonathan Wright; The Early Recognition and Management of Malignant Disease in the Digestive System, by Dr. Max Einhorn; Malignant Disease in the Male Genito-urinary System, by Dr. J. W. S. Gouley; and The Treatment of Inoperable Malignant Tumors, by Dr. William B. Coley.

The Medical Society of City Hospital Alumni, St. Louis.—At the last meeting, on Thursday evening, the 18th inst., the following papers were presented: The Report of an Operation for Strangulated Hernia complicated with Retained Testicle and Intra-abdominal Encysted Hydrocele of the Cord, by Dr. Julius Kohl; and The Importance of Careful Preparatory and After-treatment in Abdominal Surgical Cases, by Dr. A. H. Meisenbach.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, and plague were reported to the supervising surgeon-general during the week ending May 13, 1899:

Small-pox—United States.

Mobile, Ala.	May 5	2 cases.	
Washington, D. C.	May 11	No new cases.	
Jacksonville, Fla.	Apr. 29-May 6	7 cases.	
Savannah, Ga.	May 9	4 "	
Chicago, Ill.	Apr. 29-May 6	1 case.	
Evansville, Ind.	Apr. 29-May 6	9 cases.	
Emporia, Kan.	May 6	4 "	
Garnett, Kan.	May 6	1 case.	
Kansas City, Kan.	May 8	32 cases,	8 deaths.
New Orleans, La.	Apr. 29-May 6	5 "	
Shreveport, La.	May 8	1 case.	
Baltimore, Md.	Apr. 29-May 6	8 cases.	
Boston, Mass.	Apr. 29-May 6		1 death.
Benton Harbor, Mich.	Apr. 29	Present.	
Kalamazoo Township, Mich.	Apr. 29	Present.	
St. Paul, Minn.	Apr. 29	1 case.	
Cincinnati, Ohio.	Apr. 28-May 5	15 cases,	1 "
Cleveland, Ohio.	Apr. 28-May 6	16 "	
Erie, Pa.	May 2	1 case,	
Johnstown, Pa.	Apr. 29-May 6	1 "	
Steelton, Pa.	Apr. 22-29	1 "	
Providence, R. I.	May 10	1 "	(seaman).
Nashville, Tenn.	Apr. 28-May 6	1 "	
Galveston, Texas.	Apr. 22-29	5 cases.	
Galveston, Texas.	Apr. 29-May 6	7 "	
Laredo, Texas.	Apr. 15-22	3 "	1 death.
Newport News, Va.	Apr. 6-8	2 "	
Norfolk, Va.	May 5-11	20 "	
Portsmouth, Va.	May 5-11	10 "	
Spokane, Wash.	May 6	5 "	
Milwaukee, Wis.	Apr. 29-May 6	1 case.	

Small-pox—Foreign.

Antwerp, Belgium.	Apr. 15-22	4 cases,	2 deaths
Bahia, Brazil.	Apr. 8-15	2 "	1 death.
Rio de Janeiro, Brazil.	Mar. 24-31	6 "	4 deaths.
Hongkong, China.	Mar. 25-Apr. 1	4 "	1 death.
Barranquilla, Colombia.	Apr. 8-15	4 "	
Cairo, Egypt.	Apr. 15-22	15 "	4 deaths.
Athens, Greece.	Apr. 29-May 6	1 "	1 death.
Chihuahua, Mexico.	Apr. 23-30	10 "	2 deaths.
Mexico, Mexico.	Apr. 20-27	1 "	1 death.
Vera Cruz, Mexico.	Apr. 27-May 3	2 "	2 deaths.
Moscow, Russia.	Apr. 1-15	18 "	7 "
Odessa, Russia.	Apr. 15-22	6 "	1 death.
Warsaw, Russia.	Apr. 1-15		8 deaths.

Yellow Fever.

Vera Cruz, Mexico.	Apr. 21-27	2 deaths.
Vera Cruz, Mexico.	Apr. 22-May 3	10 "

Plague.

Aden, Arabia.	Apr. 7	1 case of plague on steamship <i>Caledonia</i> , from Bombay.
Hongkong, China.	Mar. 11-25	9 cases, 7 deaths.
Hongkong, China.	Mar. 25-Apr. 1	7 "
Bombay, India.	Mar. 27-Apr. 4	892 "
Calcutta, India.	Mar. 18-25	138 "

American Gynecological Society.—The twenty-fourth annual meeting will be held at Philadelphia, May 23d, 24th, and 25th. The sessions will be held in the hall of the College of Physicians, corner of Thirtieth and Locust Streets. The profession is cordially invited to attend. First day: Tuesday, May 23d, morning session at nine o'clock. Roll-call, reception of guests, etc. Address of welcome by Dr. Edward L. Duer, of Philadelphia. 1. Early Abdominal Section for Fibroid Tumors, with a Tabular List of all Operations Prior to 1865, Dr. Charles P. Noble, Philadelphia. 2. Aetiology of Non-malignant Rectal Stricture in Women, Dr. Beulen Peterson, Grand Rapids, Mich. 3. Sixty-five Consecutive Abdominal Sections without a

Death; with Clinical and Pathological Reports, Dr. Hunter Robb, Cleveland. 4. A Case of Spondylolisthesis, with Demonstration of the Pelvis, Dr. J. Whitridge Williams, Baltimore. Afternoon session at 2.30 o'clock. 5. Report of the Committee on Antistreptococic Serum in Puerperal Sepsis, Dr. William R. Pryor, New York. 6. Report of a Case of Kraurosis Vulvæ, Dr. J. Montgomery Baldy, Philadelphia. 7. Inversion of the Uterus, Dr. B. Bernard Browne, Baltimore. 8. Thrombosis following Cœliotomy in Aseptic Cases, Dr. Henry C. Coe, New York. 9. Clinical Data bearing upon Tuberculous Peritonitis, Dr. Egbert H. Grandin, New York. 10. The Avoidance of Infection following the Operation for Complete Tear of the Recto-vaginal Septum and The Localization of Obscure Pain in the Side, Dr. Howard A. Kelly, Baltimore. Second day: Wednesday, May 24th, morning session at nine o'clock. 11. Is a Sloughing Process at the Child's Navel Consistent with Asepsis in Childbed? Dr. Robert L. Dickinson, Brooklyn. 12. Surgical Treatment of Acute Puerperal Sepsis, with Special Reference to Hysterectomy, Dr. H. N. Vineberg, New York. 13. The Abuse of the Curette in Puerperal Fever, Dr. Robert A. Murray, New York. 14. Experience in the Use of Tuffier's Angiotribe in Intrapelvic Surgery, Dr. Clement Cleveland, New York. 15. The Use of Compression Forceps in Salpingo-oophorectomy and Hysterectomy, with remarks upon the Angiotribe, Dr. I. S. Stone, Washington. 16. President's address at eleven o'clock. Afternoon session at 2.30 o'clock. 17. Vaginal Cœliotomy, Dr. A. Laphorn Smith, Montreal. 18. The Treatment of Broad-ligament Cysts by Vaginal Incision and Drainage, Dr. T. J. Watkins, Chicago. 19. Surgery of the Ovaries and Tubes per Vaginal Incision, Dr. William H. Wathen, Louisville. 20. Surgery of the Ovaries, Dr. Fernand Henrotin, Chicago. 21. Remote Results of Shortening the Round Ligaments by Vaginal Section, Dr. Henry T. Byford, Chicago. 22. The Scope of Vaginal Work, Dr. J. Riddle Goffe, New York. Executive session at five o'clock. Third day: Thursday, May 25th, morning session at nine o'clock. 23. Tuberculosis of the Kidney as an Indication for Nephrectomy, Dr. Edward Reynolds, Boston. 24. Abdominal Operations for Conditions Complicating Typhoid Fever, Dr. J. Wesley Bovée, Washington. 25. Management of Surgical Injuries to the Ureters, Dr. Beverly McMonagle, San Francisco. 26. Use of Iodoform Gauze in Pelvic Disease of Women, Dr. William R. Pryor, New York. 27. Conservative Gynecology, Dr. Seth C. Gordon, Portland, Me. 28. Report of the Committee on the Use of Mammary and Thyroid Extracts in Solid Tumors of the Uterus, Dr. William E. Moseley, Baltimore. In memoriam: 1. Theophilus Parvin, M. D., Dr. William H. Parrish, Philadelphia. 2. James H. Etheridge, M. D., Dr. Fernand Henrotin, Chicago.

The American Medico-psychological Association will hold its annual meeting in New York, at the Waldorf-Astoria Hotel, on Tuesday, Wednesday, Thursday, and Friday, May 23d, 24th, 25th, and 26th, under the presidency of Dr. Henry M. Hurd, of Baltimore.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, the 13th inst., Dr. Huga Summa read a paper entitled Unguentum Credé and its Use in a Case of Septicæmia Post-abortion.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Pathology, on Tuesday

evening, the 16th inst., Dr. Joseph P. F. Burke reported a case of aortic aneurysm, with specimens, and Dr. Carr exhibited specimens of gallstones.

Changes of Address.—Dr. Samuel Webb Clason, to No. 1976 Madison Avenue, New York; Dr. L. Hibbe and Dr. H. C. Hibbe, to No. 31 Stuyvesant Street, New York; Dr. M. Lewinski, to No. 156 Henry Street, New York; Dr. J. E. Zipser, to No. 352 East Eighty-fifth Street, New York.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 6 to May 18, 1899:*

APPEL, DANIEL M., Major and Surgeon, is relieved from further duty and station at Fort Logan H. Roots, Arkansas.

DEWEY, FREDERICK S., Acting Assistant Surgeon, is relieved from duty at Fort Sill, Oklahoma Territory, and will proceed to Fort Sam Houston, Texas.

DONLAN, CHARLES E., Acting Assistant Surgeon, is relieved from duty at Camp Mackenzie, Augusta, Georgia, and will proceed to Lowell, Massachusetts.

FORD, JOSEPH H., First Lieutenant and Assistant Surgeon, is relieved from duty at the General Hospital, Savannah, and will proceed to San Francisco.

KEMP, FRANKLIN M., First Lieutenant and Assistant Surgeon, is relieved from further duty in the Philippine Islands and will proceed to Fort Hamilton, New York.

KILBOURNE, HENRY S., Major and Surgeon, is detailed as a member of a board appointed to meet on June 12th at the Army Building, New York, for the examination of lieutenants ordered to appear before it, with a view to transfer to the Ordnance Department.

PURVIANCE, WILLIAM E., Captain and Assistant Surgeon, is relieved from duty at the General Hospital, Fort McPherson, and will proceed to San Francisco.

STEPHENSON, WILLIAM, Captain and Assistant Surgeon, is detailed as a member of a board appointed to meet on June 12th at the Army Building, New York, for the examination of lieutenants ordered to appear before it, with a view to transfer to the Ordnance Department.

The following acting assistant surgeons are relieved from further duty at the Josiah Simpson General Hospital, Fort Monroe, Virginia: **BAKSHADT, HARRY A.**, and **WILSON, ROY A.**, who will report to the surgeon-general; and **METZGER, JOHN A.**, who will proceed to Pittsburgh.

The following acting assistant surgeons will proceed from their stations to the places indicated: **BOYD, WILLIAM J.**, from Macon, Georgia, to Pavilion, New York; **GRAVES, LEONARD K.**, to Camp Meade, and report to the commanding officer, Nineteenth Infantry, for duty, to accompany that regiment to Manila; **ORR, JOHN C.**, from Camp Mackenzie, Augusta, Georgia, to Chambersburg, Pennsylvania; **SCHAFER, JOHN S.**, from Camp Mackenzie, Augusta, to Leechburg, Pennsylvania; and **STUART, S. M. C.**, from Camp Mackenzie to Washington.

The following officers are detailed to represent the medical department of the army at the annual meeting of the American Medical Association, to be held in Columbus, Ohio, June 6th: **PORR, BENJAMIN F.**, Lieutenant Colonel and Deputy Surgeon General;

DAVIS, WILLIAM B., Major and Surgeon; and **IRELAND, MERRITT W.**, Captain and Assistant Surgeon.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 13, 1899:*

BLAKEMAN, R. S., Assistant Surgeon. Detached from the *Buffalo* and ordered home to await orders.

DE VALIN, C. M., Passed Assistant Surgeon. Detached from the *Brooklyn* and ordered home to await orders.

FURLONG, F. M., Assistant Surgeon. Detached from the *Scindia* and ordered to the *Independence* temporarily.

GROVE, W. B., Assistant Surgeon. Detached from the *Vicksburg* and ordered to the *Brooklyn*.

ROGERS, F., Surgeon. Detached from the *Buffalo*, directed to be examined for promotion, and ordered home to await orders.

ROSENBLEUTH, J. C., Passed Assistant Surgeon. Detached from the *Vermont* and ordered to the *Buffalo*.

WISE, J. E., Medical Inspector. Detached from the Asiatic Station and ordered to the Naval Hospital, Yokohama, Japan, for treatment; thence home to await orders.

YOUNG, L. L., Passed Assistant Surgeon. His leave of absence on account of sickness is extended two months.

Society Meetings for the Coming Week:

MONDAY, May 22d: Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, May 23d: American Medico-psychological Association (first day—New York); New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, May 24th: Medical Association of Montana (Butte); Connecticut Medical Society (first day—Hartford); North Dakota Medical Society (first day—Fargo); American Medico-psychological Association (second day); New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, May 25th: American Gynecological Society (Philadelphia); New Hampshire Medical Society (first day—Concord); Connecticut Medical Society (second day); North Dakota Medical Society (second day); American Medico-psychological Association (third day); New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, May 26th: New Hampshire Medical Society (second day); American Medical and Surgical Association (fourth day); New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York.

(private); Philadelphia Clinical Society; Philadelphia Laryngological Society.
SATURDAY, May 27th: New York Medical and Surgical Society (private).

Births, Marriages, and Deaths.

Married.

COCHRAN—WATTS.—In Morristown, New Jersey, on Wednesday, May 10th, Dr. Samuel Cochran, of New York, and Miss Margaret King Watts.

HOLSTEIN—HOPKINS.—In New Orleans, on Saturday, May 6th, Dr. James H. Holstein, of Harrisonburg, Louisiana, and Miss Dora A. Hopkins.

Died.

BARRETT.—In Boston, on Tuesday, May 9th, Elizabeth, infant daughter of Dr. M. J. Barrett.

MINOT.—In Milton, Massachusetts, on Thursday, May 11th, Dr. Francis Minot, of Boston, in the seventy-ninth year of his age.

TRACY.—In Saranac Lake, New York, on Thursday, April 13th, Dr. Robert S. Tracy, aged twenty-seven years.

Letters to the Editor.

THE PERIOD OF INCUBATION OF MEASLES.

FRANKFORT, N. Y., May 8, 1899.

To the Editor of the *New York Medical Journal*:

SIR: In the *Journal* of May 6th appears a letter from Sara Newcomb Merrick, M. D., upon the above-named subject. In this communication the doctor bases conclusions upon an experiment when she was employed as a teacher in the far South.

Believing that the "facts" as related are based upon error as to the source of infection in this so-called experiment, it naturally follows that the period of incubation will have to be modified. In my opinion the school did not become infected by reason of the boy who came a mile in the open air, remained in the school fifteen minutes, and came in immediate contact with no one. It is much more in keeping with experience to conclude that the infection which found forty-two little ones came from the "little sister" for whose books the boy came, "because she had the measles." We are all familiar with similar instances when the child is allowed to continue to attend school in the early stages of disease, during which time infection is communicated to many others. I believe that readers of the *Journal* will hardly accept the reported source of the infection, but, like myself, will find sufficient cause about the "little sister."

It is fortunate, too, for us all that the infections are not carried from the sick to the well to any such alarming extent as the doctor's report would indicate. If this were true the physician would be little less than a public nuisance as he delivered death-dealing infections from home to home.

In a practice of more than twenty years, having had

to do with hundreds of cases of this and other infectious diseases, I have never had the misfortune to carry into my own or other home any one of them, and I wish to protest against the theory of carrying wholesale infection in clothing under the conditions related in this outbreak of measles.

GEORGE M. MCCOMBS, M. D.

MODIFICATIONS OF THE HAGEDORN NEEDLE.

470 COMMONWEALTH AVENUE, BOSTON, April 27, 1899.

To the Editor of the *New York Medical Journal*:

SIR: In the April 15th issue of your *Journal*, on page 546, you publish under the head of New Inventions Foster's modification of the Hagedorn needle. I beg to say that this modified form of the Hagedorn needle has been in use here in Boston for the past ten years, and is kept in stock by all the principal instrument dealers here. It goes commercially under the name of Packard's needle. I have recently learned that the Kny-Scheerer Co., of New York, manufacture them in Germany and import them to this country by the gross. It possesses all the advantages which Dr. Foster has so well laid down.

HORACE PACKARD, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

(Continued from page 682.)

XIX.

RECOVERY OF COMPENSATION.

Demand.—The first step to be taken by the physician to recover compensation for services performed is to make a demand on the patient for the amount which is due. This is usually and most properly done by presenting the patient with a bill. Should this means prove ineffectual and other amicable efforts likewise fail in producing the desired result, more drastic measures would then become necessary; but before departing from peaceful methods of collection and attempting to enforce the payment of the money by legal measures, it is well to first consider whether the legal status of the creditor is such as to enable him to invoke the aid of the court.

Is Physician Legally Qualified to Practise?—Has the physician fully complied with the requirements of the law so as to be entitled to practise medicine, and, if not, what legal rights has he in the premises?

The first question is one of fact, to be determined by carefully examining the statutes of the State in which the physician practises, and learning whether or not all of the requirements are fulfilled. If a license from the State board is prescribed, has this license been obtained? And if this license must be filed with a certain county officer, has it been so filed? Should such an examination show a defect in the physician's legal right to practise, a careful examination of the law then becomes necessary to determine what rights he really has.

Rights of Unqualified Practitioners.—It has been observed that the statutes of several States expressly provide that any physician practising medicine unlaw-

fully shall not be permitted to recover for his professional services.* In the majority of the States, however, there is no express provision upon the subject, and in such States the right of the unqualified physician to collect is the subject of judicial construction.

It is a familiar rule of law that no compensation can be recovered in a court of justice for performing an act which is unlawful, or which is prohibited by statute.† Upon this principle the courts of nearly all of the States have based their decisions, and have accordingly declined to aid the physician who has failed to comply with the requirements of the law in recovering fees.‡ The supreme court of Tennessee refused to permit a physician to recover where he had not procured and filed his license before the services for which he sought to obtain payment were rendered, but had secured and filed such license before suit was brought. The court said: "Where a statute has for its manifest purpose the promotion of some object of public policy, and prohibits the carrying on of a profession, occupation, trade or business, except in compliance with the statute, a contract made in violation of such statute can not be enforced."§

In Texas the court of civil appeals held that a physician who had graduated from a medical college recognized by the American Medical Association, but who had failed to procure a certificate from the board of medical examiners and have the same recorded, should not be entitled to a judgment for fees, notwithstanding no board of medical examiners had been appointed.||

And so it has been held by an early decision in Massachusetts (1822) that a physician duly qualified by the law of another State to practise in such State shall not thereby be entitled to come within the borders of Massachusetts and recover for services rendered. The court said: "The object of the act was to guard against the evil effects to be apprehended from the practices of ignorant and unskillful practitioners. This purpose can not be completely obtained, if those of this description, if any such there be, on the borders of the commonwealth, may be permitted to practise within its limits."^

This rule must, of course, be understood as subject to the privilege since extended to regularly licensed practitioners of neighboring States to attend patients within its borders.δ

The court of appeals of the State of Missouri stands alone in holding that an unqualified practitioner of medicine is entitled to recover a fee in the absence of an express statutory provision to the contrary. The court says: "Whatever may be the rule in some States, we must consider it as well settled in this State for the present that, where a contract is not prohibited by law, and has been fully executed by the person rendering the services, he may recover their value from the person who received their benefit, though in rendering the services the person was guilty of a misdemeanor, because he

rendered them without a proper certificate or license for doing so." * From a critical examination of this statement it will appear that the court discriminates between those contracts which are *malum in se* and those which are in themselves lawful, but whose execution is restricted to persons possessing prescribed qualifications; refusing to aid in collecting in the former case, but enforcing a payment in the latter, even though the party proves himself to have committed a misdemeanor in establishing his right to recover.

This is undoubtedly the law in Missouri at the present time, but the fine-haired distinction upon which it is based dwindles in importance when compared with the forceful reasoning by which the courts of other States have arrived at the contrary conclusion.

Chief-Justice Rufin, of the supreme court of North Carolina, commenting upon this distinction, said: "The distinction between an act *malum in se* and one merely *malum prohibitum* † was never sound, and is entirely disregarded; for the law would be false to itself if it allowed a party through its tribunals to derive advantage from a contract made against the intent and express provisions of the law." ‡

The Missouri court is not content with discriminating between things *malum in se* and those *malum prohibita*, but it goes a step further and says that the practice of medicine is a thing not even *malum prohibitum* except as to those unqualified to exercise its functions; and that because it is not in itself prohibited the court ought not to refuse its aid to one who has unlawfully practised medicine, an office not in itself wrongful, and which might lawfully be exercised by another.

Notwithstanding these distinctions, the question remains clear and distinct. May one unqualified to practise medicine exercise the functions contrary to the law and recover compensation by the aid of our courts? Justice Learned, of the New York supreme court, said: "It is a settled principle that one can not recover compensation for doing an act to do which is forbidden by law and is a misdemeanor. The contrary rule would make an absurdity. It would permit one to hire another to commit a misdemeanor and would compel the payment of the contract price for doing what the law forbids." §

Justice Clopton, of the supreme court of Alabama, said: "It is too well settled in this State to require further argument, that a penalty, imposed by statute, implies a prohibition; and a contract founded on its violation is void, though not so expressly declared by statute." ||

It may be safely understood from the foregoing that the law is well settled that one practising medicine or surgery without first complying with the requirements of the statutes can not enforce the payment of his fees, whether the statutes expressly so declare or are silent upon the subject—the State of Missouri being an exception to this rule.

No Recovery for Medicines furnished. The physician being disqualified to practise can not recover for

* Such provisions exist in Georgia, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Nebraska, North Carolina, Rhode Island, Vermont, Virginia, and Wisconsin.

† *Dickerson vs. Gordy*, 5 Robinson's Rep., 189.

‡ *Gardner vs. Tatum*, 81 Cal., 370; *Roberts vs. Levy* (1874), 31 P. Rep., 570; *Dickerson vs. Gordy*, 5 Robinson's Rep., 189; *Fox vs. Dixon*, 34 St. Rep., 710.

§ *Haworth vs. Montgomery*, 91 Tenn., 16; 18 S. W. Rep., 299.

|| *Kendry vs. Schultz*, 6 Tex. Civ. App., 461.

δ *Spaulding vs. Alford*, 1 Pick., 33.

δ See *N. Y. Med. Jour.*, January 21, 1899, p. 97.

* *Smith vs. Benson*, 61 Mo. App., 86.

† *Malum in se* are those acts which are wrong in their character, such as murder, as opposed to *malum prohibita*, or those acts which are only wrong because they are prohibited by law. — *Rapal vs. Lawrence*, Law Dictionary.

‡ *Sharp vs. Farmer*, 4 Drexler and Battle's Law, 122.

§ *Fox vs. Dixon*, 34 St. Rep., 710.

|| *Harrison vs. Jones*, 80 Ala., 112.

services rendered, but what effect does this disqualification have upon his right to recover for medicines which he has actually furnished to the patient?

An instructive case upon this question was decided in the supreme court of New York about seventy years ago. A medical practitioner who was not licensed was called to attend a patient after other physicians were unable to benefit her. Quoting from the opinion of Chief-Justice Savage: "He (the physician) came and prescribed for the patient, and cured her by the use of two phials of medicine and a box of ointment. What the medicines were the witness knew not. She was asked the value not of the medicines simply, for her answers show that she estimated the value of the services of the (physician) as worth sixteen or eighteen dollars, because the patient was cured. The medicines at the apothecary's shop would probably have been worth only a few shillings. . . . Where the same person officiates as physician and apothecary he comes within the decision of this court that an unlicensed practitioner is incapable of suing for services rendered or medicines furnished as a physician. As the patient was cured, it is to be regretted that (the physician) was not paid; but if unlicensed pretenders to skill in diseases can recover, as in this case, the statute may become a dead letter; the country will be filled with mere quacks, peddling their nostrums, and deceiving and destroying the ignorant and credulous, the very mischief which the statute is intended to prevent. I do not say that the (physician in this case) is a mere pretender, for he cured his patient, and in honor and honesty should have been paid; but it is our duty to administer the law."* In a later case an unlicensed physician attempted to recover for medicines to which he had a patent, which he had prescribed and furnished to a patient, but the court refused to give him judgment because he was in effect "peddling his nostrums in the character of a physician, and inducing people to buy and use them in consequence of their reliance on his pretended skill." "Such practices," says the court, "the law of the State has declared to be dangerous to the public health."†

In harmony with the cases above quoted from, the supreme court of Alabama holds that the question whether the unlicensed practitioner may recover for drugs and medicines furnished depends upon whether such drugs and medicines were administered and furnished by him acting in the capacity of a physician; or whether he sold them to the patient acting in the capacity of a druggist or apothecary. If in the former capacity, he can not recover for the value of such drugs, but in the latter he should be allowed to recover.‡

In full accord with the cases considered upon this point is a recent Kansas case in which the supreme court by a process of cogent reasoning concludes that a physician who furnishes drugs to a patient does so in the capacity of a physician and not as an apothecary, and that, if he is unlicensed to practise medicine, he can not recover the value of the drugs so furnished.§

In this case Justice Green said: "Can the plaintiff recover for the medicine alone, having furnished it as an attending physician? The statute in question forbids any one from practising medicine for reward or compensation, without having the qualification prescribed

therein. The object of this law, doubtless, was to prevent unauthorized and unqualified persons from practising medicine in any of its branches. The right to practise the calling of the physician is, by this statute, taken from certain unqualified persons, and the statute should not be so construed as to give a person the privilege of exercising a right which is in violation of any of its provisions. To hold that a person who furnished medicine, as a physician, could recover compensation for the medicine so furnished or prescribed, would, in our judgment, render the statute nugatory, and any unauthorized person might prescribe for a patient and simply charge for his medicine and thus defeat the very object of the law. The practice of medicine may be said to consist in three things: First, in judging the nature, character, and symptoms of the disease; second, in determining the proper remedy for the disease; third, in giving or prescribing the application of the remedy to the disease. If the person who makes a diagnosis of a case also gives the medicine to the patient, he is, in our judgment, practising medicine within the provisions of the statute in question; and if unauthorized to practise, or is acting in violation of the provisions of the statute, he is not entitled to compensation for the medicine, which he furnishes at the time, as a physician; and the instruction of the court, which said to the jury that the plaintiff below (the physician) could recover for the medicine furnished, though he might not have been entitled to practise medicine, was erroneous."*

It therefore is safe to conclude that outside of Missouri the unlicensed physician is unable to recover through the courts either compensation for professional services rendered or the cost of medicines furnished to patients by him in the capacity of a physician; and that it will accordingly be unwise for one not legally qualified to practise medicine and surgery at the time and place of rendering professional services to resort to suit for the recovery of his fees.

(To be continued.)

Pith of Current Literature.

Citric Acid in the Treatment of Ozæna.—Dr. Hamm, of Brunswick (*Münchener medicinische Wochenschrift*, 1899, No. 15; *Deutsche Medicinal-Zeitung*, April 20th), recommends the removal of the pus and crusts every morning, and the insufflation with a powder-blower three times a day of a mixture of equal parts of citric acid and sugar of milk.

The Responsibility of Alcoholized Persons.—The *Alienist and Neurologist* for April states that in a discussion at the late meeting of the British Medical Association Dr. John F. Sutherland, commissioner of lunacy for Scotland, said: "A person intoxicated can not and does not know the nature and quality of the act, or that it was a wrong act, because intoxication is insanity of the most perfect type, no matter how transient."

This statement the editor considers rather too strong, and makes the following pertinent and indisputable comment: "To constitute insanity, the change of charac-

* *Allcott vs. Barber*, 1 Wend. (N. Y.) 526.

† *Smith vs. Tracy*, 2 Hall (N. Y.), 165.

‡ *Holland vs. Adams*, 21 Ala., 680.

§ *Underwood vs. Scott*, 43 Kan., 714; 23 Pac. Rep., 912.

* *Underwood vs. Scott*, 43 Kan., 714; 23 Pac. Rep., 912.

ter from alcohol must appear as in other forms of mental alienation. If a man is intoxicated to the degree that he is insane, and that result depends much upon the man and his inherent but latent psychical instability, then, of course, he is entitled to the extenuation of mental disease. But some men can never become so drunk as not to know what they are doing and saying, nor too drunk to remember their words and acts. The man insane from drink remembers hazily, if at all, and does not realize the nature and quality of his acts as when sober. But all men drunk are not insane. Many men drunk appreciate their condition and act accordingly. Realizing the mental incubus of drink, many men under its influence prudently retire for seclusion and sleep, thus acting most rationally under the embarrassing mental burden of alcohol."

The Clinical Significance of Oxaluria.—Dr. Robert F. Williams (*Medical Register*, April 15th) records cases of oxaluria from a consideration of which he makes the following deductions: 1. Whereas the appearance of oxalates in the urine—excluding their ingestion in foods—is due to a derangement of digestion or metabolism, this derangement probably has its cause in many cases in functional nervous irregularity, which may or may not be so great as to produce general nervous symptoms; and, if these are present, they are not necessarily caused by the oxalates. 2. The condition causing the appearance of oxalates in the urine may produce symptoms closely simulating the constitutional symptoms of Bright's disease. 3. The excretion of oxalates by the kidney for a short while may occasion no local disturbance of that organ, but if continued may, by irritation, cause the appearance of albumin and casts with lessened urine, corresponding to the urinary symptoms of Bright's disease, and, if unchecked, may lead to permanent destruction of kidney tissue and to true Bright's disease. 4. In all suspicious cases in which the nephritic symptoms are accompanied by the appearance of oxalates in quantity, diagnosis should be held in abeyance and the oxaluria be overcome by appropriate remedies to exclude this as a possible cause of the symptoms before making a positive diagnosis and pronouncing a necessarily hope-dispelling prognosis.

For Blennorrhagic Epididymitis.—According to the *Indépendance médicale* for May 3d, Janowski, of Prague, recommends that the scrotum be cleansed with soap, and the following ointment applied on a layer of cotton supported by a suspensory bandage.

B. Guaiacol	45 grains;
Vaseline	450 "

M.

Oxyurides and the Vermiform Appendix.—Dr. George F. Still (*British Medical Journal*, April 1st), as the result of a series of observations published in that journal, arrives at the following conclusions: 1. That the appendix vermiformis is a common habitat of *Oxyuris vermicularis* in childhood. 2. That the generally accepted view that every single ovum of *Oxyuris vermicularis* must be swallowed before it can be hatched is at least open to doubt, and there is a strong probability that the appendix vermiformis serves in some cases as a breeding place for threadworms. 3. That the presence of threadworms in the appendix may cause a catarrhal condition therein, as shown post mortem by a swollen appearance, due to thickening of its wall. 4. That this swollen condition of the appendix due to

threadworms is associated in some cases with pain in the right iliac fossa which may simulate ordinary appendicitis. 5. That in the treatment of threadworms large injections must be used, and in view of the difficulty of dislodging the worms from the appendix, and their possible presence in the small intestine, the injections should be combined with the administration of drugs by the mouth.

Influence of Pregnancy on Ovarian Cysts.—Gottschalk (*Frauenarzt*, November, 1898; *University Medical Magazine*, May) reports the case of a patient, aged forty years, who had an ovarian cyst which two surgeons had declined to remove. She passed through pregnancy and labor normally, but on the second day after delivery developed symptoms of peritonitis, which subsided in the course of a fortnight. Nine weeks later she had a more severe attack, and abdominal section was performed successfully. The cyst was firmly adherent to the intestines, the pedicle was twisted twice around its axis, and the sac was filled with pus and foul-smelling gas. A pelvic abscess further complicated the case. Cultures of the colon bacillus were obtained from the cyst contents. The writer's deductions are that extensive adhesions may develop during pregnancy as well as after delivery. Torsion of the pedicle may follow the emptying of the gravid uterus in consequence of the sudden change in the intra-abdominal pressure. Infection of the cyst during the puerperium is well known, Zetter having reported twenty-one cases.

Communicated Madness.—The *Medical Review of Reviews* for April says that a strange story of communicated madness is reported from Ireland. Of three sisters belonging to Glencollins, near Kingwilliamstown, County Cork, one, on being married, went to live at Guinequilla, County Kerry; another settled down at Cordal, Castle-Island; the third remaining at home. Some time ago, the sister residing at Guinequilla developed symptoms of mental derangement. On hearing of this, her sister from Cordal went to visit her, and shortly afterward she also became similarly afflicted. The third sister at Glencollins, on learning of the unhappy circumstance, immediately went to see her sisters, when she, too, lost her reason. The sister first attacked has been conveyed to the Killarney District Lunatic Asylum, and it is reported that the other two are making satisfactory progress toward recovery.

Differences between Primary and Secondary Pneumonias.—Dr. Gordon W. Mylks (*Kingston Medical Quarterly*, April) thus sums up a paper read before the Kingston Medical and Surgical Society: Pneumonia may be secondary to typhoid fever, septicaemia, influenza, typhus fever, and prolonged renal disease. The points of difference, clinically, between primary and secondary pneumonias, some of which are illustrated by the cases related, are: 1. The insidious onset of secondary pneumonias, unlike the very abrupt onset of the primary form. 2. Secondary forms are more dangerous to the life of a patient. 3. The initial rigor is frequently absent. 4. The temperature rises gradually and does not go so high as in primary acute pneumonia. 5. Pleuritic extension and its never-varying sign—severe pain in the side—is often absent in secondary pneumonias. 6. Cough is very frequently absent. 7. There is usually greater disturbance of the skin and renal functions in secondary pneumonias. 8. Herpes also is usually absent.

Proceedings of Societies.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Meeting of February 1, 1899.

The President, Dr. S. ALEXANDER, in the Chair.

(Concluded from page 650.)

Nephritis complicating Acute and Subacute Gastro-enteritis in Infants and Young Children.—Dr. HENRY KOPLIK presented the paper of the evening with this title.

Dr. WINTERS said that this paper recalled to mind some work that had been done in this line by English physicians some fifteen years ago. During these investigations, the kidneys, in cases of fatal gastro-enteritis, had been submitted to Dr. Klein for microscopical examination, and nephritis had been found in every instance. This nephritis was of the same type as that found in scarlatina—namely, glomerulo-nephritis, with blood and epithelial and hyaline casts in the convoluted tubules, and was probably of infectious origin, as it was in scarlatina.

In a large proportion of the fatal cases of gastro-enteritis there were convulsions before death, and they were probably of renal origin, for they were not seen at the outset, or during the early stages of the disease, as they would be if they were due to the original infection; but they occurred toward the end of the complaint, or at the time, or after the onset of the renal complication. Investigations were made in several hundred fatal cases of gastro-enteritis, and convulsions occurred in almost every case. Not only was the renal complication of infectious origin, but in all probability all the complications in cases of gastro-enteritis were of similar nature—namely, the pneumonic process, which was formerly called hypostatic pneumonia, the pleuritic complication, frequently ending in empyema, and the meningitis, which was often a fatal complication toward the end of the disease. The thrombi formed in the lateral sinuses in the fatal cases were also of a similar nature, and not due to failure of the circulation, as was formerly supposed. He believed the meningitis and the thrombosis of the sinuses to be of streptococcus origin. In fact, if one would watch closely and compare carefully, one was impressed with the fact that virulent cases of scarlatina and virulent cases of acute gastro-enteritis in infants were very similar in their onset, in their symptomatology, in their complications, and in their modes of termination. Aside from the throat and skin lesions, there were no two diseases which resembled each other more closely.

He had only the highest commendation for the author's suggestions as to treatment. It was well understood that opium was seldom used in the treatment of acute gastro-enteritis in infants. He did not recall a single instance in cases which had been seen in consultation for several years where opium had been used by the attending physician. As so-called antiseptic drugs were useless in the gastro-enteric tract, we were forced to have recourse to the only method known of clearing this tract thoroughly—namely, by irrigation. After the first thorough washing he believed in the free use of very hot water in small quantities, given by mouth. For a period of twenty-four hours it seemed to him harmful to use either milk, beef juice, barley water, or any other nutriment.

Dr. J. H. HUDDLESTON said that he was very glad to respond to the opinions expressed in the paper and by Dr. Winters. He had been impressed by his own examinations with the frequency of albumin in this class of cases, and especially at the number of patients who appeared at the dispensaries with that condition. He had never used the adult's tube in irrigation of the infantile bowel, and had been much interested in its recommendation. He was surprised that the writer of the paper had condemned the ordinary catheter.

Dr. N. E. BRILL said he was delighted with the paper of Dr. Koplik, as it called renewed attention to the importance of bowel irrigation in the gastro-enteritis of children. He wished to state that it did not seem to him that Dr. Koplik had proved the position taken in his paper, for it was a well-known fact, which nearly every text-book presented, that the occurrence of albumin and the presence of casts in the urine need not necessarily indicate that they were the result of acute nephritis. What Dr. Koplik had proved was that there were a number of varieties of gastro-enteritis occurring in children.

As to the question of the fatality of streptococcus enteritis, it seemed to him that there were not sufficient data to base any deductions on. If he remembered correctly, having read the papers of Dr. Hirsch and Dr. Libman, who studied this subject in Escherich's clinic, those gentlemen had reported but three cases—namely, Dr. Hirsch one and Dr. Libman two. Of the patients, Dr. Hirsch's had died, and one of Dr. Libman's had died and one recovered. Dr. Libman certainly did not state that this form of gastro-enteritis was extremely fatal. It was possible that nephritis might complicate this form of gastro-enteritis, but it was probable that the pathological process occurring in these, as in the other forms, was a parenchymatous degeneration of the kidney, and not an acute inflammatory condition. This would be in harmony with the known facts that acute parenchymatous degeneration of the kidneys occurred, as a rule, in the infectious diseases, and not acute nephritis, excepting in diseases like scarlatina, yellow fever, and the like. All the preceding speakers as well had apparently forgotten this. One was not justified in concluding that there was an acute nephritis present because the patient presented oedema and the urine contained albumin and casts, for the oedema might be the result of the cardiac changes and weakness due to a debilitating disease, such as gastro-enteritis was, and the albumin and casts be the result of non-inflammatory parenchymatous changes in the kidneys.

He wished to add his tribute of praise to Dr. Koplik for deprecating the use of irritant drugs in the treatment of these bowel affections.

The President said he had listened with great interest to the paper read by Dr. Koplik. He did not agree with Dr. Brill on the question of nephritis. The microscopical findings showed blood and pus and not the indications of parenchymatous degeneration.

Then the report of pathological findings convinced him that Dr. Koplik's point was right. As to the treatment, he thought that by the use of injections of saline solutions many patients could be saved. He knew this was true in surgical cases, and he had been able to save patients that had passed into what had seemed a fatal uræmia after an operation.

Dr. R. J. CARLISLE asked, Why use subcutaneous injections instead of injections by rectum?

Dr. KOPLIK said he still felt free to call this acute

nephritis. It was like nephritis; the epithelium of the tubules of the kidney was destroyed. In scarlatina there was a piling up or desquamation and degeneration, according to Delafield. These cases might be placed in a special class until more facts were obtained.

Any albuminuria in gastro-enteritis was abnormal, and if we looked closely casts would be found. He thought that most authors agreed with him that albumin was indicative of nephritis.

The speaker said he had stated nothing new as to the treatment of these cases, for the method suggested had been used long before there was any knowledge of bacteriology, and his reason for presenting it was that he wished to emphasize its value. The reason he used the large tube was that he could get it up to the second curve of the sigmoid flexure, and a soft catheter would strike against the sacrum and could not be passed as high and as readily. The large-sized tube was easy to pass and the water could be introduced quicker.

His reason for using hypodermoclysis was that in desperate cases we should use every means available.

Book Notices.

The Influence of Character and Right Judgment in Medicine. The Harveian Oration delivered before the Royal College of Physicians, October 18, 1898. By Sir DYCE DUCKWORTH, M. D., LL. D., Hon. Fellow of the Royal College of Physicians of Ireland, etc. London, New York, and Bombay: Longmans, Green, & Co., 1898. Pp. 7 to 53.

THE task laid upon the Harveian orator is indeed not a gentle one, for he must traverse ground already covered many times and by some of the most famous of those who are able to combine medicine and oratory. Our author apologizes for the worn nature of the topics assigned, then plunges in bravely and sketches the lives of some of the famous benefactors, financial and scientific, of the Royal College of Physicians. From this he turns to the great field of modern science, and touches on the work yet to be done concerning the relation between the patient and the bacterium. He says we should not be satisfied with the mere discovery of the organism, but endeavor to determine the conditions which permit it to enter and attack the apparently healthy body. He then speaks of gout and serofula as fields not yet cleared up, and finally refers to that great experiment now being tried in England, the abolition of compulsory vaccination. The oration closes with a plea for the wider recognition of the moral force which guided Harvey, the desire for truth.

The Principles of Bacteriology. By Dr. FERDINAND HUEPPE, Professor of Hygiene in the University of Prague. Authorized Translation from the German by Dr. E. O. JORDAN, Assistant Professor of Bacteriology in the University of Chicago. Chicago: The Open Court Publishing Company, 1899. Pp. x, 167. [Price, \$1.75.]

THE scholarly character of this work was fully set forth in the review of the original German edition, which appeared in this journal in 1896. Of the treatise itself it may now be said, after three years, that its many excellent features have been universally recognized, and that it stands as a classic in the literature on bacterio-

logical principles. Possibly the author's intolerance of opposing views may appear to many as disagreeably blunt, now that the polemical discussions appear in plain English, and it must be admitted that our increased knowledge of some subjects now permits of more accurate statements on some points in descriptive bacteriology than were advisable in 1895. Yet, in its main features, the work still leaves little to be desired in this department. While the German text was unusually difficult, the work of the translator, Dr. Jordan, is highly commendable, the usual remnants of German idiom being almost entirely absent, although the full meaning of the author has been very uniformly retained in good English.

The publishers, also, may be congratulated on the general appearance of the book. On many grounds, therefore, the work deserves a place in every bacteriological library.

L'Exercice de la médecine et le charlatanisme. Par P. BROUARDEL, Professeur de médecine légale et doyen de la Faculté de médecine de l'Université de Paris, etc. Paris: J.-B. Baillière et fils, 1899. Pp. viii-560. [Prix, 12 fr.]

THIS interesting course of lectures treats of a subject to which but little attention is directed in medical education in this country. Perhaps this is partly due to the fact that the sanitary laws vary greatly in the different States, but nevertheless too little instruction is given at present on the medico-legal side of medicine. Brouardel has endeavored to present those points at which, so to speak, the medical practitioner comes in contact with the law. The first part of the book concerns the conditions under which a person may legally practise medicine in France, and this is of special interest to the American student, for it covers the laws governing the admission of foreign students to the French universities and their right to practise after obtaining a degree. There are explanations of the conditions of notification of contagious diseases, of expert testimony, and of the responsibility in the use of powerful drugs; there is also a discussion on fees, from which it would appear that our French brethren have difficulties in the collection of the same; and, finally, there is a chapter devoted to the question of illegal practice and charlatanism.

The Microscopy of Drinking Water. By GEORGE CHANDLER WHITPLE, Biologist and Director of Mount Prospect Laboratory, etc. First Edition. First Thousand. New York: John Wiley & Sons, 1899. Pp. xii-300.

WHILE the importance of the chemical and bacteriological analysis of water has long been recognized, the study of the lower forms of animal life included under the term "microscopy of water" has received far too scant attention as a branch of hygiene. It is beginning to appear that quite as accurate estimates of the purity of drinking water may be based upon its microscopy as upon the somewhat uncertain and more laborious results of chemical and bacteriological analysis. On this account the appearance of an elementary work upon the forms of animal life commonly found in drinking water, and the significance attaching to their presence, is most acceptable to a large class of reader who are brought in contact with this subject. The present volume is specially adapted to the needs of the medical profession, as the practical use of the data presented requires only a moderate biochemical training. The first half of the

work contains a great deal of useful information regarding the objects and methods of microscopical examination of water, the factors governing the appearance of micro-organisms in water, the origin and significance of odors in water, and the method of storing surface water. The remaining chapters are devoted to an elementary description of the principal genera of micro-organisms, beautifully illustrated by twenty-nine full-page, half-tone pictures. The volume will fully repay careful reading, is sufficiently complete for an elementary book of reference, and should find a place in every medical library.

On Varix: Its Causes and Treatment, with Especial Reference to Thrombosis. An Address delivered at the Inaugural Meeting of the Nottingham Medico-Chirurgical Society, Session 1898-1899. By WILLIAM H. BENNETT, F. R. C. S. Eng., Surgeon to St. George's Hospital and Joint Lecturer on Surgery in the Medical School, etc. Reprinted from the *Lancet*, October 15, 1898, with the Addition of Twelve Illustrations. London, New York, and Bombay: Longmans, Green, & Co., 1898. Pp. 53.

THIS small volume contains an excellent discussion of the subject of varicose veins, special attention being directed to the more dangerous accidents which may occur in those afflicted with this malady. These are the rupture or laceration of a large varix and the formation of a thrombus in the lumen of the diseased vein, with the attendant danger of severe or fatal embolism. The various methods of treatment are carefully considered, and a number of interesting illustrative cases are included from the author's practice. The book is well bound and printed.

La Photothérapie. Par N. R. FINSEN, I. Les rayons chimiques et la variole. II. La lumière comme agent d'excitabilité. III. Traitement du lupus vulgaire par les rayons chimiques concentrés. Publication du *Finsen's medicinske Lysanstalt de Copenhague*. Paris: Georges Carré et C. Naud, 1899. Pp. vi-7 to 99.

THE study of the therapeutic effects of light upon the organism may be said to begin at a very early date, for we know from the Latin writers that the Romans were accustomed to take a sun bath as a part of their regular regimen. The advantage gained by this process must have been in the increased perspiration and the stimulus given to the peripheral circulation by the heat and chemical action of the sun's rays. Finsen has approached the problem from a different standpoint. He has studied the harmful effects produced, and finds that they are caused not so much by the light rays as by those invisible chemical rays, the so-called ultra-violet. Acting on the idea that these rays were injurious in any acute inflammation of the skin, because they caused additional irritation, he experimented with small-pox, and, excluding all chemical rays by a deep red glass, found that the course of healing was much lightened. The vesicles did not suppurate and the pitting was very slight. These results have been verified by a considerable number of other observers, and their reports are collected in the form of an appendix at the end of the pamphlet. Use has also been found for these chemical rays in the treatment of lupus by concentrating upon the diseased area either sunlight or the electric-arc light which have had the heat rays removed. This is accom-

plished by passing the light through a hollow lens which has been filled with cupric-ammoniosulphate solution. The results of this method are too recent to permit any conclusions to be drawn at present.

Suite de monographies cliniques sur les questions nouvelles en médecine, en chirurgie, en biologie. No. 14. Traitement de la syphilis. Par E. GAUCHER, Professeur agrégé à la Faculté de médecine de Paris, etc. Pp. 36. Paris: Masson et Cie., 1899. [Chaque monographie séparément 1 fr. 25.]

THIS is a record of the personal views of the author on the treatment, and is accordingly clear and practical. He divides treatment according to the stage of the disease. The primary lesion, in his opinion, should not be excised, for the disease has invaded the system before the appearance of the chancre. Only in case of acute secondary infections of the diseased area is there to be any active local treatment. Treatment of the general disease should begin as soon as a diagnosis can be made, without waiting for the appearance of secondary eruptions, since it renders the latter milder in their manifestations. Mercury bichloride is the best preparation for administration by the mouth, and that route should always be chosen if possible. Inunctions are uncertain and the hypodermic methods are painful and dangerous. Calomel should not be used in injections, but one of the soluble salts, preferably the benzoate of mercury, should be employed. The iodides are useful adjuvants in the first stage of the disease and curative in the tertiary. The treatment should be continued at least four years. Many other suggestions and useful formulæ are contained in this little monograph, but enough has been given to show its scope.

A Practical Treatise on Fractures and Dislocations. By LEWIS A. STIMSON, B. A., M. D., Professor of Surgery in Cornell University Medical College, etc. With Three Hundred and Twenty-six Illustrations and Twenty Plates in Monotint. New York and Philadelphia: Lea Brothers & Co., 1899. Pp. xix-19 to 818. [Price, \$5.]

THE new edition of this most valuable book is especially welcome in consequence of the much greater attention now being devoted to the minute study of bone injuries because of Röntgen's discovery, and also owing to the changes which have taken place in the methods of treatment of fractures, as regards both splinting and the operative replacement of complicated fractures and dislocations. The work now appears in a single volume, a much more convenient form than the two volumes previously published, and there have been many changes in the text to correspond with the author's increased experience and the alteration of opinions regarding the mechanism and nature of some obscure forms. The most marked instance of these changes is in the discarding of the old classification of "fractures of the base" and "fractures of the vault" of the skull, and the substitution of "circumscribed fractures of the vault" and "fissured fractures with injury of the brain," a change which places the emphasis on the more important lesion, the injury to the cerebral structures. We notice with some interest the very conservative attitude toward the final diagnostic value of the Röntgen rays, the author holding that except in very complicated cases of fracture near a joint the use of the rays furnishes very little more information than that afforded by the careful use of eyes

and fingers, and that great care is necessary in the interpretation of the pictures obtained. Whether this voices the general opinion of surgeons at the present time is rather doubtful, but certainly too much reliance is often placed on an imperfect plate when the case requires nothing but careful palpation for a diagnosis.

The American Yearbook of Medicine and Surgery. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Collected and arranged with Critical Editorial Comments by SAMUEL W. ABBOTT, M. D., JOHN J. ABEL, M. D., J. M. BALDY, M. D., CHARLES H. BURNETT, M. D., J. CHALMERS DA COSTA, M. D., W. A. NEWMAN DORLAND, M. D., LOUIS A. DUBRING, M. D., D. L. EDSALL, M. D., VIRGIL P. GIBNEY, M. D., HENRY A. GRIFFIN, M. D., JOHN GUTIÉRAS, M. D., C. A. HAMANN, M. D., ALFRED HAND, JR., M. D., HOWARD F. HANSELL, M. D., MILTON B. HARTZELL, M. D., BARTON COOKE HURST, M. D., E. FLETCHER INGALLS, M. D., WYATT JOHNSTON, M. D., W. W. KEEN, M. D., HENRY G. OHLS, M. D., WENDELL REBER, M. D., DAVID RIEMAN, M. D., LOUIS STARR, M. D., ALFRED STENGEL, M. D., G. N. STEWART, M. D., J. R. TILLINGHAST, JR., M. D., and J. HILTON WATERMAN, M. D., under the General Editorial Charge of GEORGE M. GOULD, M. D. Illustrated. Philadelphia: W. B. Saunders, 1899. Pp. 4 to 1102. [Price, \$6.50.]

THIS useful work presents the same claims to consideration as in previous years. The list of contributors is almost unchanged with the exception of the serious loss sustained through the death of Dr. Pepper.

Such books are, by their nature, precluded from showing to any marked extent the individuality of the editors, yet there is a considerable difference in the methods shown in the different articles. To a great extent a wise conservatism is apparent, and much matter of doubtful or ephemeral value is commented upon by the editors with dissent or protest. It is, of course, impossible to determine each year how much of its literature will be forgotten before the close of the following year, but it is probable that "the results of the advances made in all departments of medical science," as the editor in chief puts it, may be contained in a smaller space than the eleven hundred pages of the *Yearbook*. We would not protest against yearly reviews; they have become indispensable, and the one under consideration is one of the best as well as the bulkiest, but unquestionably the modern tendency to superficial and desultory reading, and all that it entails, is encouraged by their use.

To review the book in detail is out of the question, but a glance at the different subjects shows their general excellence.

In connection with the recent agitation of the subject, the statement that living streptococci have been found in so-called anti-streptococci serum, as well as tubercle bacilli in the tuberculin R of Koch, is startling, and indicates the danger of using preparation of unknown composition in the serum treatment.

The article on surgery is a model of its kind, regards both material and editorial comments, and the same may be said of other portions of the work.

If more discrimination could be shown and the bulk of the book reduced by the elimination of worthless matter, and not by too great condensation, a tendency to which is noticeable, and which leads to a cataloguing of progress rather than a review, this *Yearbook* would remain among the best of its kind.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by JUSTIN DALAND, M. D. (Univ. of Penna.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc.; J. MITCHELL BRUCE, M. D., F. R. C. P., London, England, Physician to and Lecturer on the Principles and Practice of Medicine in the Charing Cross Hospital; and DAVID W. FINLAY, M. D., F. R. C. P., Aberdeen, Scotland, Professor of the Practice of Medicine in the University of Aberdeen, etc. Volume IV. Eighth Series, 1899. Philadelphia: J. B. Lippincott Company, 1899. Pp. xii-375.

THE most striking feature of this volume is the number and excellent quality of its illustrations. There are no fewer than twenty-two plates and drawings, exclusive of figures and charts, greatly enhancing the clearness and value of the articles with which they are inserted. In other respects also the current issue is a worthy successor to previous volumes. The lectures of Professor Grancher on tuberculosis are continued, and a series by Rosenheim on the treatment of chronic constipation is begun. The latter are upon a subject that is of more than common interest, and the thoroughly practical character of the first lecture leads us to look forward with impatience to those that are to follow. Among other very practical articles are one by McGillivray on corneal ulceration, one by Hale White on alterations of weight by diet, and a report on Trendelenburg's operation for varicose veins by Gould. Martin reports a case of pernicious anemia in which recovery took place—certainly a most unusual outcome.

Surgical Nursing. By BERTHA M. VOSWINKEL, Late Nurse-in-Charge of the Children's Hospital, Columbus, Ohio. Second Edition, revised and enlarged. With One Hundred and Twelve Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. xvi-11 to 206. [Price, \$1.]

THIS small volume on surgical nursing seems to present the essentials of the subject quite as fully as is necessary. It is abundantly illustrated and the printing and binding are above the average.

Handbook of Obstetric Nursing for Nurses, Students, and Mothers. Comprising the Course of Instruction in Obstetric Nursing given to the Pupils of the Training School for Nurses connected with the Woman's Hospital of Philadelphia. By ANNA M. FELLERTON, M. D., Obstetrician, Gynecologist, and Surgeon to the Woman's Hospital of Philadelphia,

etc. Fifth Revised Edition, illustrated. Philadelphia: P. Blakiston, Son, & Co., 1899. Pp. xiv-17 to 262. [Price, \$1.]

THE publication of a fifth edition of this book on obstetric nursing furnishes some evidence of its popularity and value. It is simply and clearly written and well illustrated. It is a work which should be read by every one interested in the subject.

BOOKS, ETC., RECEIVED.

Annual Report of the Mount Sinai Hospital of the City of New York. January, 1899.

Marriages of the Deaf in America. An Inquiry concerning the Results of Marriages of the Deaf in America. By Edward Allen Fay, Vice-president and Professor of Languages in Gallaudet College, etc. Washington: The Volta Bureau, 1899. Pp. vii-527.

The Pennsylvania Society for the Prevention of Tuberculosis. Report for the Year ending April 13, 1898.

The President's Address: Aims and Claims. By Charles R. Dickson, M. D., of Toronto, Canada. [Reprinted from the *Transactions of the American Electrotherapeutic Association*.]

Electricity in the Treatment of Gout, and some Surgical Uses of Electricity. By Charles R. Dickson, M. D. [Reprinted from the *Transactions of the American Electrotherapeutic Association*.]

Text-book of Ophthalmology. By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized Translation, revised from the Seventh Enlarged and Improved German Edition. By A. Duane, M. D., Assistant Surgeon, Ophthalmic and Aural Institute, New York. With Two Hundred and Seventy-seven Illustrations. Second American Edition. New York: D. Appleton and Company, 1899. Pp. xv-860. [Price, \$5.]

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By J. Mitchell Bruce, M. A. Aberd., M. D. Lond., Fellow of the Royal College of Physicians of London, etc. Philadelphia: Lea Brothers & Co., 1899. Pp. xii-609. [Price, \$1.50.]

A Step Forward. A Treatise on Possible Social Reform. By F. C. Theodore Krüger. New York: Isaac H. Blanchard Company, 1899. Pp. 3 to 30.

Transactions of the American Association at its Twenty-second Annual Meeting held in Princeton, New Jersey, May 31 and June 1, and in New York city, June 2, 1898.

Public Health Reports issued by the Supervising Surgeon-General of the Marine-Hospital Service, under the National Quarantine Act of April 29, 1878, and the Act granting Additional Powers and imposing Additional Duties upon the Marine-Hospital Service, approved February 15, 1893. Volume XIII. Nos. 1 to 52.

Twenty-first Annual Report of the State Board of Health of the State of Connecticut, with the Registration Report for 1897 relating to Births, Marriages, Deaths, and Divorces.

Twenty-second Annual Report of the Board of Health of the State of New Jersey, and Report of the Bureau of Vital Statistics, 1898.

The Middlesex Hospital, W. Reports of the Medical, Surgical, and Pathological Registrars for the Year 1897.

Peripheral Nerve Transplantation, with the Report of a Case in which the Sciatics of a Dog were Transplanted Successfully between the Severed Ends of the

Median and Ulnar Nerves of a Man. By Reuben Petersen, M. D., of Chicago. [Reprinted from the *American Journal of the Medical Sciences*.]

Traumatism of the Eyeball involving the Crystalline Lens. By Cassius D. Wescott, M. D., of Chicago. [Reprinted from the *Railway Surgeon*.]

New Inventions, etc.

A SIMPLE INHALER FOR THE COMBINED ADMINISTRATION OF GAS AND ETHER.

By CHARLES H. PECK, M. D.,
ATTENDING SURGEON TO THE FRENCH HOSPITAL.

THE advantages of beginning ether anaesthesia with nitrous-oxide gas have long been known, but interest in the method and its practical revival for routine work in most of the larger hospitals in New York is of comparatively recent date, and is due chiefly to the efforts and able demonstrations of Bennett. Few anaesthetists can hope to rival the skill of Dr. Bennett in the use of this method, which in the hands of an expert is certainly the ideal general anaesthesia for the great majority of cases, but any hospital junior can be taught to give it sufficiently well for all practical purposes, provided a suitable inhaler not too complicated is available.

In most of the hospitals the gas is first given with one of the ordinary inhalers made for dental practice, and then, when the patient is thoroughly under the influence of the gas, ether is quickly substituted (preferably given in one of the closed ether inhalers, such as the Ormsby) and rapidly pushed, allowing very little admixture with air until ether anaesthesia replaces that of the gas. The transfer from gas to ether in this manner is attended with some difficulty, and requires a considerable amount of skill; the patient may partly recover consciousness and struggle before the ether begins to take effect, or the abrupt change to strong ether vapor may cause temporary cessation of breathing, with the attendant cyanosis of asphyxia added to the normal cyanosis of gas anaesthesia. The advantages of an inhaler with which the change from gas to ether can be made gradually are self-evident. The facts that no such inhalers are manufactured in this country and that those obtainable abroad are complicated and expensive have led me to devise a modification of one of the simple gas inhalers that would meet the indications and be easily manipulated.

The accompanying cuts show the inhaler, which has been in use regularly in my service at the French Hospital, and also in private work, since July, 1898.

The inhaler is attached to a cylinder of gas with the ordinary tube and bag. A sponge is saturated with ether and placed in the ether cup. When the reservoir is being filled with gas and the inhaler is first applied to the face, the cut-off *c* is thrown forward, preventing the escape of gas, and the patient is allowed to breathe air, which enters through the opening *e* for a moment. After a few inspirations, when the patient has gained confidence and is breathing deeply, cut-off *c* is thrown sharply back and pure gas is given until the patient is thoroughly under its influence. Up to this time cut-off *d* remains thrown backward as in Fig. 1, preventing the entrance of ether vapor and allowing the free passage of gas. When the patient is thoroughly under the gas, cut-

off *d* is thrown about a third of the distance forward, the gas has been completely shut off, and the amount allowing the admission of a little ether vapor, and clos- can be regulated as desired. The whole inhaler can be

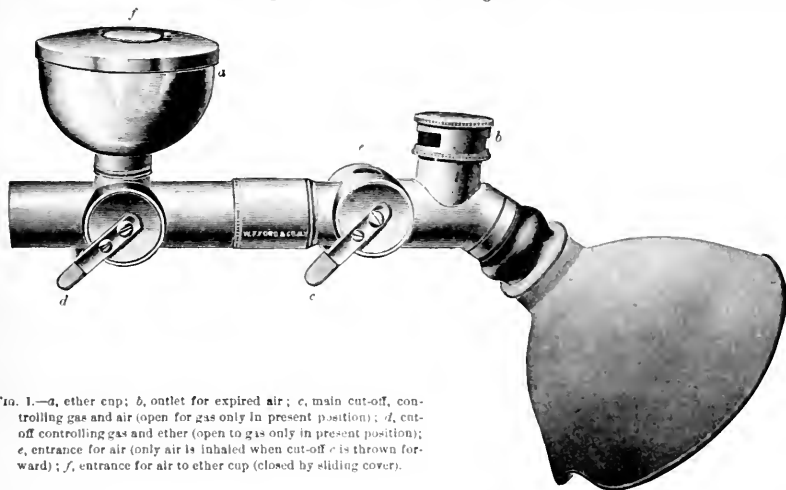


FIG. 1.—*a*, ether cup; *b*, outlet for expired air; *c*, main cut-off, controlling gas and air (open for gas only in present position); *d*, cut-off controlling gas and ether (open to gas only in present position); *e*, entrance for air (only air is inhaled when cut-off *c* is thrown forward); *f*, entrance for air to ether cup (closed by sliding cover).

ing the gas entrance to a similar extent; after a few breaths, it is carried a little farther forward to half, two thirds, and finally the full distance, shutting off the gas taken apart, easily kept clean, and packed in a small space.

10 WEST THIRTY-EIGHTH STREET.

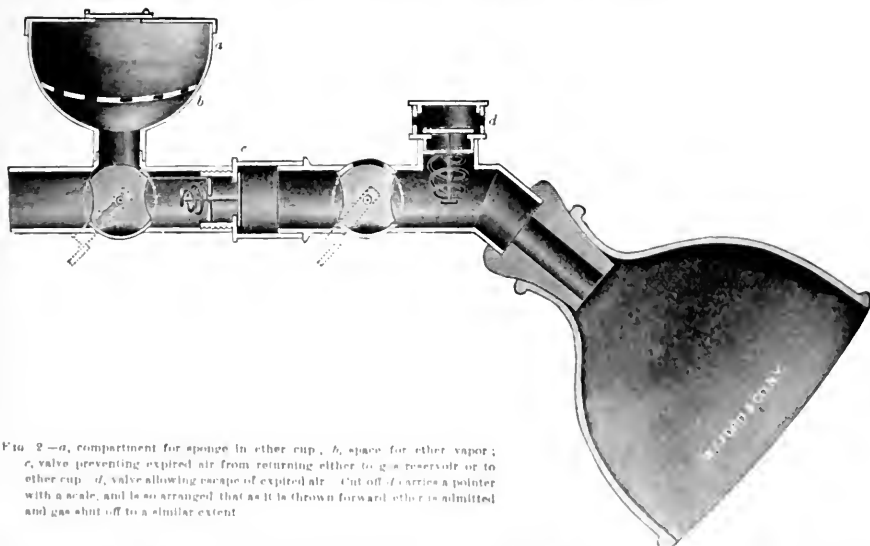


FIG. 2.—*a*, compartment for sponge in ether cup; *b*, space for ether vapor; *c*, valve preventing expired air from returning either to gas reservoir or to ether cup; *d*, valve allowing escape of expired air; cut-off *e* carries a pointer with a scale, and is so arranged that as it is thrown forward ether is admitted and gas shut off to a similar extent.

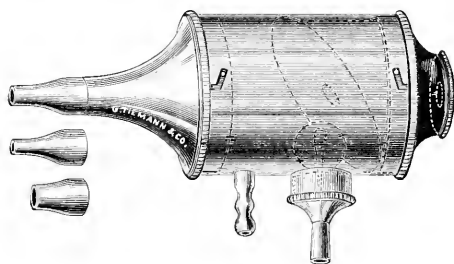
entirely and giving pure ether vapor, the transfer occupying about a minute and a half or two minutes. The inhaler is kept constantly in place until the ether anesthesia is well advanced, and then is replaced by any other cone, a closed inhaler being unnecessary. If it is desirable to give air at any stage of the anesthesia, on account of cyanosis or irregular breathing, it can be done by manipulating cut-off *c*, without removing the inhaler from the face. The opening *f*, with a sliding cover, is used to allow air to enter the ether cup after

A MODIFIED SIEGLE'S PNEUMATIC EAR SPECULUM.

By EMIL AMBERG, M. D.,
DETROIT, MICH.

IN using the Siegle's pneumatic ear speculum I found the light reflected from the glass a disturbing factor. To overcome this difficulty I tried to place the source of light inside the instrument. Following my suggestions, George Tammann & Co., New York, have made a very satisfactory instrument, which is shown in

the accompanying illustration. A small electric lamp is used, so placed that the light rays do not interfere with the examination. They are reflected by a concave mir-



ror into the meatus. Tips of different sizes for the meatus can be attached to the instrument. The tips are to be covered with pieces of rubber tubing.

32 WEST ADAMS AVENUE.

Miscellany.

A Statue to Sir Thomas Browne, M. D.—We are glad to learn from the *Medical Review of Reviews* for April that a statue is to be erected at Norwich to Sir Thomas Browne, M. D., the scholarly author of the *Religio Medici* and many other works on medical and philosophical subjects. He was one of the brightest literary stars of England in the seventeenth century, and is ranked by James Russell Lowell with de Quincy and Jeremiah Taylor as "the richest and most dazzling of theoreticians; our most imaginative mind since Shakespeare." He graduated in arts at Oxford, and in medicine at Leyden, and subsequently at Oxford also, and settled in the practice of physic at Norwich.

Misunderstood.—"Be patient!" growled the leech. "Patient, indeed! Why, I am always patient. I sit like Patience on a monument."

"I thought they lay under one," mildly suggested a brother officer. And again there are strained relations.—*Echoes from a Mining Camp.*

Who Laughs Last Laughs Best.—The *Chicago Medical Recorder* for April has the following: In a recent discussion on the subject of fracture of the patella, before the Chicago Medical Society, Dr. Daniel T. Nelson of this city stated that in 1881 he had the privilege of seeing Sir William MacCormac wire a fractured patella at St. Thomas's Hospital, London. Sir William at that time stated that he had no fear of septic infection of the joint and expected to get bony union. Dr. Nelson called attention to the fact that when he treated the Prince of Wales the operator was less bold. Having called the attention of the great London surgeon to the apparent discrepancy, he received the following letter, which will be of interest to all:

15 HARLEY STREET, W., May 1.

"MY DEAR SIR: I have to thank you for the paper you have been kind enough to send. Since the conversation with me you report I have sutured in many cases

of fractured patella, but not then nor now do I consider it an exclusive method of treatment nor that by it alone can good results be obtained. In the case of H. R. H. to which you refer, I did not consider it a suitable case for suture, and I also hoped and believed that a good result was attainable without. In this opinion my colleagues concurred.

"You will be glad, I am sure, to learn that this opinion has been justified by the result, a short, thick fibrous band, which permits H. R. H. to use the limb practically the same as before. He has not the smallest limp, even, and some of the surgeons present when the prince came the other day to the Royal College to hear my Hunterian oration, failed to detect which limb had been the injured one. So the 'joke' is not so bad a one after all.

Faithfully yours,

"WILLIAM MACCORMAC."

The Creed of the Spiritual Healer.—According to the *Lancet* for April 29th, the *Critic* publishes some amusing verses on the creed of the spiritual healer. Two members of this sect, says the *Lancet*, which seems to be another name for the Christian Scientist, have informed an interviewer that to keep in good health "what you want to do is to think that you can't be ill. Try and (sic) remember that the body is nothing." The poet of the *Critic*, after musing on the foolishness that has beset men who for generations have suffered and even died without using so easy a therapeutic measure, sings thus:

For the body's nought at all;
Rich and poor and great and small,
Thin and fat,
Man is nobody; you'll note
There is nothing in his coat
Or his hat.

Should you lose your legs, anon,
Never think of grafting on
Legs of cork;
Don't believe you're even lame,
Put your boots on all the same,
Rise and walk!

Never work and ne'er be sad;
Hunger's nothing but a fad;
Feed the mind.

When on nothing you are cloyed,
If you feel a kind of void—
Think you've dined.

A Huge Microbe!—The *Quarterly Medical Journal for Yorkshire* (England) and the *Adjoining Counties* for April says: "We take the following advertisement from a daily paper:

"*Notice to the World.*—The Divine, the Hero of Consumption, I now tell one of the wise, that it has offered the Gauntlet, to the greatest in the World, and the Prince of Science not exempt. Dare the Star of Science now accept the gauntlet, or any other great Consumption Treater, who thinks he is master? It has spoken loud enough to be understood, viz., January, 1898, and also in March, 1898, in three leading papers of Yorkshire. Why has it not met with the respond it demands? Is it because they fear it? or is it because they have not the courage to encounter it? What Medicine on Earth can boast of cutting lumps of black clotted blood and a portion of the decayed Lungs and

bringing up the Microbe, 1½ inches long, and driving the huge matter through the bowels, with a smell almost impossible to bear? What Medicine has killed Galloping Consumption three times in one Person? If such Medicine is in the possession of any man, I now dare it to come forth and show to the world who is Master of Consumption. The day and hour can not be too quickly named for business. This should suffice the London Gentleman. The Divine and knowledge is ready at a moment's notice, and will show the World that — is the only place where such a Medicine exists. I want no humbug. I am ready for war, and mean business at once. I think the Learned Gentleman will see now what I mean.

Yours truly,
* * *

And yet there are fools enough, not only in England, but here in America, and in every civilized country, to afford a substantial income to the professor of such balderdash!

The Self-Limitation of the Physician's Aims.—Dr. John E. Harper (*Plexus*, April), in an address on Success in Medicine, delivered at the graduating exercises of the College of Physicians and Surgeons of the University of Illinois, related that Sir Henry Holland, in his eighty-fifth year, wrote a sketch of his life, and said that it would be profitable for each of the new graduates to read it. He began practice, at the age of twenty-one, among the aristocracy in the West End of London, and at the outset made the following two resolutions: 1. That he would never practice more than ten months in any one year, spending the remaining two months in travel and recreation. 2. That he would never allow his practice to exceed fifty thousand pounds per annum. He never broke either rule, although he practised sixty-four years, and several times collected in one year the amount to which he had limited himself. He numbered seven prime ministers of England among his patients, and was physician extraordinary to the Queen. He attributed his long life, good health, and remarkable success in his profession to a strict observance of the two rules made at the beginning of his medical career.

A Testimonial to Dr. G. D. MacGauran.—At the last meeting of the New York Celtic Medical Society the members presented to Dr. MacGauran a handsome service of silver. The presentation speech was made by Dr. Francis J. Quinlan, who referred in high terms to the work done by Dr. MacGauran for the science of medicine, and also spoke of the loss that the city would sustain in the departure of Dr. MacGauran, who goes to Lawrence, Massachusetts, in consequence of his wife's state of health. Speeches were made by Dr. Connelley, Dr. MacGuire, Dr. O'Brien, Dr. MacGowan, Dr. Morrissey, and Dr. Cronin, and responded to by Dr. MacGauran, who referred feelingly to his early association with the society, and how he had watched it grow up under the leadership of men destined in the future to direct not only county, but national societies.

Medical Officers as Administrators.—The *Irish Navy Journal* for May 13th quotes the *London Times* and *Navy Gazette* as saying of General Leonard Wood: "On the principle, we suppose, of *ne sutor supponit crepidum*, it has been urged that medical officers should make indifferent governors or, as in India, 'Residents,' and we can remember some hard words used by a retired and well known Indian civil servant about the administration of a medical officer who occupied one of

the distinguished positions to which we advert; while dissenting from the view alluded to, it is of public importance to draw attention to the career of Major-General Leonard Wood, of the United States Volunteers, military governor of the province of Santiago de Cuba, who in 1883 joined the army of the States as a surgeon. He is a conspicuous example of the special fitness for organizing and administrative work under new conditions which seems to be developed by medical training."

The Royal Army Medical Corps.—According to the *Lancet* for April 29th, it was recently announced in the British Parliament that, owing to the redress of the long-standing grievances of the army medical officers by the creation last year of the Royal Army Medical Corps on a self-containing and self-administering regimental footing, the lack of medical officers, which has prevailed of late years in the British army, is being overcome, and they are already able to obtain two candidates for each vacancy in the corps.

A New Quarterly Journal.—It is announced that on June 1st the first number of the *American Medical Quarterly* will be issued. It is to be published in New York, but edited in Buffalo, by Dr. William Warren Potter. Dr. Potter's experience as a medical editor, his wide knowledge of the profession in the United States and Canada, and the high esteem in which he is held make it certain that the new journal will be creditable and influential.

A Tribute to Dr. Thaddeus A. Reamy, of Cincinnati.—On Dr. Reamy's seventieth birthday, April 28th, a hundred and seventy Cincinnati physicians held a banquet in his honor. We learn from the *Indiana Medical Journal's* account of the entertainment that Dr. P. S. Conner acted as toastmaster and that the speeches were excellent.

The Section in Laryngology and Otolaryngology of the American Medical Association.—This year's programme contains forty-seven items, including an address by the chairman, Dr. Emil Mayer, of New York. The second day's sessions will be held jointly with the Section in Ophthalmology.

What a Blow with an Axe may do.—At the recent meeting of the South Carolina Medical Association Dr. D. M. Crosson, of Leesville, related a case that had occurred in his practice a number of years before. A quarrel arose between two negroes who were chopping wood, and one of them dealt the other a vicious blow with an axe. The wound extended from the outer edge of the right ear, which it severed, forward and slightly downward, fracturing the ramus of the jaw, wounding the external carotid artery, and reaching forward nearly two thirds of the length of the body of the jaw. The man bled profusely, and would have been dead before the doctor arrived, but for the presence of mind of another negro, who stuffed cotton into the wound and made pressure on it. As it was, he was almost dead. Dr. Crosson hurriedly put off the handle of a scalpel beneath the common carotid, where he was able to do by forcing the instrument downward, free the vessel toward the surface, and tied it. After an effort he succeeded in bringing about reaction, adjusted the fragments of the broken bone, and cleaned and sutured the wound and dressed it antiseptically. For three or four weeks the man had to be fed with liquids through a tube passed

in at the opposite side of the mouth. Only moderate suppuration resulted, the broken bone united firmly, and the wound healed, leaving a comparatively small scar. "Since his recovery from the terrible cut," said Dr. Crosson, "he has been a most grateful patient, and has paid me every dollar of his bill, which was made moderate owing to his indigent circumstances. He is now in good health and labors hard every day."

The American Medico-psychological Association.—The fifty-fifth annual meeting will be held in New York, on May 23d, 24th, 25th, and 26th, under the presidency of Dr. Henry M. Hurd, of Baltimore. In addition to the president's address, the following papers will be presented: Address of Welcome, by the Right Reverend Henry C. Potter; address of welcome on behalf of the medical profession of New York city, by Dr. Edward G. Janeway; The Practical Value of Prophylaxis in Mental Disease, by Dr. A. B. Richardson, of Massillon, Ohio; Progress in the Clinical Study of Psychiatry, by Dr. Edward Cowles, of Waverley, Massachusetts; The Imagination in Relation to Mental Disease, by Dr. R. H. Chase, of Philadelphia; Remarks on Contagion and Infection in Insanity, and Measures of Prevention, by Dr. Richard Dewey, of Wauwatosa, Wisconsin; The Role of Wound Infection as a Factor in the Causation of Insanity, by Dr. A. T. Hobbs, of London, Ontario; The Puerperal Insanities, by Dr. H. A. Tomlinson, of St. Peter, Minnesota; The Relations of Renal Disease to Mental Derangement, by Dr. W. L. Worcester, of Danvers, Massachusetts; Paretic Dementia—its Ætiology, by Dr. Sanger Brown, of Chicago; The Differential Diagnosis of Paretic and Pseudo-paretic States, by Dr. Arthur W. Hurd, of Buffalo; Lesions of the Intracranial Vessels in Brain Syphilis and Paresis, by Dr. Henry J. Berkley, of Baltimore; Vocation and Paretic Dementia, by Dr. Joseph G. Rogers, of Logansport, Indiana; Our Work and its Limitations, by Dr. E. C. Runge, of St. Louis; The Legal *versus* the Scientific Test of Insanity in Criminal Cases, by Dr. Carlos F. MacDonald; The Psychology of Criminals and a Plea for the Elevation of the Medical Service of Prisons, by Dr. J. B. Chapin, of Philadelphia; Some Inconsistencies, Legal and Medical, about Insanity, by Dr. J. T. Searcy, of Tuscaloosa, Alabama; Judicial Errors in Lunacy, by Dr. George Villeneuve and Dr. E. P. Chagnon, of Longue Pointe, Quebec; Annual Address, by Dr. Frederick Peterson; Thyroid Extract—its Place in the Therapeutics of Insanity, by Dr. William Mabon and Dr. W. L. Babcock, of Ogdensburg, N. Y.; Reflex Irritation, with Special Reference to Eye Strain—A Factor in Nervous and Mental Disease, by Dr. Charles A. Drew, of State Farm, Massachusetts; Epileptical Mania, by Dr. T. J. W. Burgess, of Montreal; Disorders of Sleep among the Insane, by Dr. Theodore H. Kellogg; The Boarding-out Treatment of the Insane in America, by Dr. G. Alder Blumer, of Utica, N. Y.; The Nature and Principles of Psychology, by Boris Sidis, Ph. D.; The Physiological and Morphological Basis of the Retraction Theory, by Dr. Ira Van Gieson; The Retraction Theory from a Psychical Standpoint, by Dr. William A. White, of Binghamton, N. Y.; The Internal Structure of the Ganglion Cell, by Dr. Stewart Paton, of Baltimore; The Desirability of Close Connection between Psychological Laboratories and Hospitals for the Acutely Insane, by Dr. Samuel B. Lyon, of White Plains, N. Y.; The Pathology of Epilepsy, with an Introduction to a New Treatment, by Dr. Charles G.

Hill, of Baltimore; The Public Care of the Epileptic in Massachusetts, by Dr. Owen Copp, of Palmer, Massachusetts; The Treatment of Epileptics in Colony, by Dr. J. Frank Edgerly, of Oakbourn, Pennsylvania; The Palates of Idiots, by Dr. Walter Channing, of Brookline, Massachusetts; Hospital Dietary, by Dr. F. C. Hoyt, of Mount Pleasant, Iowa; Inhibition of Speech and Writing, by Dr. Richard Dewey, of Wauwatosa, Wisconsin; A Review of the Literature Published for the Instruction of Nurses in Institutions for the Insane, by Dr. William D. Grainger, of Bronxville, N. Y.; Metaphysics, by Dr. H. C. Eymann, of Cleveland; The Importance of Better Cooperation and Organization among Private Hospitals for the Insane, by Dr. J. J. Kindred, of Astoria, N. Y.; and Christopathy—A Glance at the Neuropathic Side of Christian Science, by Dr. C. H. Hughes, of St. Louis.

The New York Academy of Medicine.—At the stated meeting, on Thursday evening, the 18th inst., the following papers were to be presented for discussion: Recent Methods of Local Anæsthesia for Minor and for Major Surgical Operations, by Dr. Alexander B. Johnson; Further Experimental Researches on the Effects of Different Anæsthetics upon the Kidneys, by Dr. Robert Coleman Kemp; Technics of Administration of Anæsthetics, by Dr. Thomas L. Bennett.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 24th inst., the following cases are to be presented: Healed tuberculous laryngitis with pulmonary tuberculosis remaining active, by Dr. T. P. Berens; salivary calculus, by Dr. W. Freudenthal; tuberculosis of the nose, throat, and larynx, without manifest pulmonary involvement, by Dr. C. G. Coakley; marked displacement of the cartilaginous septum in a child, by Dr. W. C. Phillips; a case illustrating the Watson operation for deflected septum, by Dr. R. C. Myles; and endothelial sarcoma of the nose, by Dr. M. D. Lederman. Dr. D. H. Goodwillie exhibited casts of the nose, and Dr. H. H. Curtis exhibited two radiographs of the antrum, showing intruding teeth.

The Late Dr. Charles Mason, of Peekskill.—Dr. Charles Mason, who for nearly a quarter of a century lived and practised his profession for the benefit of the residents of Peekskill and vicinity, is now no more. Stricken in robust health, while performing his duty, he passed quietly over to the silent majority, April 19, 1899.

We, the members of the medical staff of the Peekskill Hospital, in commemoration of the fact that he was one of the original board and that his work as such was of the type of recognized ability, desire to lay this, a tribute of worth, upon his tomb, and to convey to his family an expression of our sincere sympathy.

[Signed.]

CHARLES C. KNIGHT,

President;

ALEXANDER O. SNOWDEN,

Vice-president;

PERLEY H. MASON,

E. DEMOTTE LYON,

P. W. O'BRIEN,

STEPHEN F. HORTON,

WILLIAM M. CARDART,

CHARLES A. KNIGHT,

CHARLES R. F. GREENE,

Secretary.

PEEKSKILL, N. Y., May 9, 1899.

Original Communications.

THE GENERAL DIAGNOSIS OF
SYPHILIS OF THE BRAIN AND
SPINAL CORD.*

By B. SACHS, M. D.,

PROFESSOR OF MENTAL AND NERVOUS DISEASES IN THE NEW YORK POLYTECHNIC
CONSULTING NEUROLOGIST TO MOUNT SINAI HOSPITAL, ETC.

I HAVE construed my especial part in this symposium—a merry name for a serious talk—as a summons to place before you, in as concise a form as possible, the chief points in diagnosis by which the physician shall be able to recognize syphilis of the nervous system. It shall be my endeavor to present such views as are firmly established, and to touch upon mooted points only if their discussion be of special interest. Not many years ago specific affections of the nervous system were diagnosed largely by exclusion. If the symptoms did not point to anything else of a definite character, they were often attributed to a preceding syphilitic infection, and the diagnosis was as often incorrect as it is apt to be when this method is adopted.

The general practitioner may be supposed to be interested first of all in the question of the frequency of specific affections of the central nervous system. Statistics are not easily gathered on this point, for it is difficult to keep track of those who have acquired syphilis; but Hjelmlan† states, on what appears to be good authority, that fifteen to twenty-five of each one thousand persons affected with syphilis develop some specific disease of the central nervous system, excluding those who develop either tabes or general paresis, and both these diseases have a very important, if not an intimate, relation to constitutional lues. The majority of the able writers on the subject are under the impression that syphilitic nervous disease appears to be on the increase; if so, this fact can be explained on the assumption that under the present social conditions, in view of the great struggle for existence on the part of the majority of the people, the strain to which the nervous system is subjected makes it an easier victim to any constitutional poison, whether that be syphilis, alcohol, tobacco, or what not. We neurologists are also pleased to think that the increase may be apparent only and does not mean a clearer understanding of the specific forms of brain and spinal-cord disease.

Syphilitic nervous affections are naturally considered to be a manifestation of constitutional disease, in accordance with the prevailing doctrine, and are held to follow naturally in the wake of an ulcus durum. We have some hesitation in claiming that these manifestations ever follow upon the soft chancre, and

not do to enter into a discussion of the relation between these two early lesions and constitutional syphilis. I have been taken to task for a statement made some years ago* that syphilis of the central nervous system occurs in conjunction with the lesser form of the initial infection, but it is a satisfaction to record that others hold the same view. Without fear of contradiction it may be said that these affections of the nervous system do occur not infrequently in patients who give a clear history of soft chancre. I am willing to leave it to the syphilographer to decide whether under such circumstances he would or would not diagnose constitutional syphilis. Hjelmlan and others are of the opinion that the greatest number of cases of cerebral syphilis result from mild and moderately severe forms of the disease, and with this view my own experience would lead me to agree. Whether or not the later invasion of the central nervous system is dependent upon the character of the initial treatment is a matter still under dispute. It can not be denied that many of the severest forms of nervous syphilis which we are called upon to treat have been handled unsatisfactorily in the initial stages; in many other cases the initial treatment has been all that could be desired. It will be wiser, therefore, to be liberal in our interpretation of the sufficient or insufficient amount of treatment, and to give every patient presenting the symptoms of syphilitic disease of the nervous system the benefit of another and most thorough course of specific remedies.

It was a satisfaction to hear several previous speakers question the propriety of maintaining the old-fashioned classification into secondary and tertiary forms, for syphilis of the nervous system is not always a late manifestation of the constitutional disease. In fully eleven per cent. of cases of syphilis of the brain the cerebral symptoms have occurred within the first half year after the initial infection, and in 24.6 per cent. of all the cases (the largest percentage) between six and ten years after the primary sores.† I have known a specific form of facial palsy to occur almost simultaneously with the initial lesion, and have seen undoubted spinal symptoms appear within six weeks, together with the characteristic rash.

The brain and spinal cord are affected very much more frequently than are the peripheral nerves, but whether the disease happens to involve one or the other part of the nervous system is completely governed by a very definite series of general conditions, which can be best understood and interpreted if we attempt to examine into the morbid lesions that are concerned.

It may be considered that the most important benefits of the general discussion were those which showed that the

* In Morrow's *State*.† Based on statistics of Nansen, collected by Oppenheimer. *Die syphilitischen Erkrankungen des Centralnervengestirns*. *Neurologisches Speciel Pathologie und Therapie*. Band ix, part i.

* Read before the New York Academy of Medicine as part of a general discussion on syphilis, March 16, 1899.

† Review in *Neurolog. Centralblatt*, 1894, p. 342.

lesions in the nervous system will appear to be not unlike those affecting other organs. In the brain and spinal cord, syphilis may become manifest by the formation of special growths (gummata), by the development of a gummatus infiltration starting from the meninges, which may be associated with single, well-defined tumors, and which may or may not invade the substance of the brain or of the spinal cord; and lastly, it may do mischief through disease of the blood-vessels. Gummata occur most frequently upon the convexity, at the base, and in the internal ganglia of the brain; they are less common in the spinal cord. These gummata may at times attain the size of a walnut, or even of a chicken's egg, but miliary gummata are not unknown. Granulation tissue forms the stock of this tumor, consisting largely of closely packed round cells. The intercellular substance is generally of the order of connective tissue filled out by these newly formed cells. Star-shaped, spindle-shaped, and even giant cells are found interspersed among the round cells. The whole mass is more or less vascular, the blood-vessels being frequently contracted and often obliterated. It was Virchow who first pointed to the fact that the granulation tissue in syphilitic new growths is unproductive; that it has but a short span of life, and that while there may be some proliferation, there is at a very early day a retrogressive metamorphosis. This leads to a simple atrophic process which often ends in a caseous formation. It is this self-limitation of the syphilitic neoplasm, whether or not it is influenced by therapeutic measures, which is of the utmost importance; and if we add that this syphilitic process emanates, as a rule, from the capillary vessels, we have said all that we need to say with a view to the relation between this special morbid lesion and some of the clinical features dependent upon them. A solitary gumma is rare; in fully ninety-five per cent. of the cases there are many such multiple tumors, which may be associated with a diffuse infiltration of the meninges, from which it takes its start. The neuroglia, the ganglion cells, and the nerve fibres do not provide the soil upon which the new growth is established, but the connective tissue of the meninges, in some instances the periosteum of the cranial bones or of the vertebrae, are the starting points of the entire process.

It has just been intimated that the capillary vessels are important factors in the development of the syphilitic neoplasm, but the larger blood-vessels of the brain, as well as those of the spinal cord, are the seat of changes which, since the brilliant investigations of Heubner, are known to be due to the syphilitic virus. To be brief, syphilitic disease of the blood-vessels is generally manifested by changes in the intima. Specific endarteritis has become almost a byword in neuropathology, but all the coats of the blood vessels may participate in this proliferating process. Oppenheim, Siemerling, and others have shown conclusively that a periarteritis

may be the primary change, the blood-vessel itself becoming diseased in secondary fashion. But whatever the nature of the arterial disease may be, it leads ultimately to an occlusion of the blood-vessel, with subsequent softening of the area supplied by the same. It is characteristic of this form of arteritis that the occlusion need not be permanent, and that several attempts may be made to block the blood channel before actual success in this direction is obtained—a fact which it is well to bear in mind in connection with the many transitory symptoms so characteristic of brain- and spinal-cord syphilis. However carefully these various changes have been studied, the fact remains that the morbid lesions *per se* are not so different from others that they can be recognized in every instance as truly syphilitic in character. Unfortunately, the bacillus of syphilis, in spite of the careful researches of Lustgarten, Disse, Taguchi, and others, has not yet been satisfactorily revealed, and the resemblance to tubercular, and even sarcomatous, affections is striking enough to bother at times the experienced pathologist. The general character of the morbid manifestations, the multiplicity of the lesions, the evidences of a tendency to retrogressive changes, to the formation of scar tissue, and the general benign character of the process will help to a proper recognition of the nature of the lesion. There is much of interest to be said in connection with this special part of the subject; * but I leave it at this point, for I am concerned with the morbid process in so far only, as an understanding of the same helps us to a proper interpretation of the clinical symptoms.

If we were to attempt to construct the symptomatology of brain- and spinal-cord syphilis from a knowledge of its morbid anatomy, we should be justified in maintaining that syphilis of the central nervous system is characterized above all by the multiplicity of the symptoms, and by a tendency to remissions and relapses, which is quite in keeping with the tendency on the part of the tissue to proliferate and undergo retrogressive metamorphosis. Moreover, while the syphilitic process invades or encroaches upon nerve tissue, it is not rapidly destructive, whence it follows that syphilitic disease of the central nervous system may lead to a variety of symptoms, none of which is necessarily complete. No other disease gives rise so often as syphilis does to paresis rather than to paralysis; to slight rigidity rather than to contractures; often to partial, rarely to complete anaesthesia; to transitory and incomplete aphasia rather than to permanent and absolute loss of speech. These general symptoms will serve to indicate the character of the morbid process, all other manifestations being dependent upon the special localization of the disease in some one or in several parts of the central nervous system. As you view the charts before you, you

* Cf. previous writings on this subject: N. Y. Med. Jour., Sept. 19, 1894; Brain, xvi, 1893; Nervous Diseases of Children, 1895, chap. xviii.

will infer that if the disease affects the convexity of the brain, you may have headaches, loss of intelligence, delirium, even coma. You may also find the patient afflicted with paralysis or with epileptoid attacks, particularly if the motor area is the part invaded. If the speech centres be affected, aphasia is the result; and in syphilis motor aphasia is much more common than the sensory forms. Apoplectic seizures with accompanying hemiplegia result from disease of the internal blood-vessels of the brain. If the disease involves the structures at the base—and this is the seat of predilection—cranial nerve symptoms, above all ocular palsies, are the most common clinical manifestations. If the luetic process invades the spinal cord, you will find the symptoms which are to be specially attributed to disease of the cervical, dorsal, lumbar, or sacral segments of the cord. Note also that with the invasion of the anterior, the lateral, or the posterior divisions, there will be either atrophic and paralytic, spastic and paralytic, or sensory symptoms. In some instances one or two or all of these divisions may be affected, and you may construct for yourselves the vast variety of symptoms. No set of symptoms is pathognomonic of syphilis of the brain or spinal cord, and I would not weary you with all the details of localization, which can, after all, be gathered easily enough from a few hours' study of the general structure of the central nervous system; but, as in so many other instances, it may safely be said that the question of *localization* of the lesion has been very much overdone in comparison with that far more important point—namely, the *character* of the lesion. Whatever the special symptoms in a given case may be, one is not likely to go astray in suspecting syphilis if there is evidence of multiplicity of the lesions and of the incomplete character of the symptoms, as well as of a tendency to remissions, to relapses, and to recovery.

A word about the multiplicity of the lesions, the point upon which, by the way, Dr. Fox so ably insisted in his demonstration of cutaneous syphilis. There are but few diseases affecting the nervous system which give rise to multiple lesions. If we mention multiple sclerosis, tuberculosis, and sarcomatosis, we have well nigh exhausted the list. Tubercular and sarcomatous diseases are so much more malignant, run so much more rapid a course, and are so apt to manifest themselves in other organs of the body that the differential diagnosis can be established easily enough. It is not so easy to distinguish between syphilis of the nervous system and multiple sclerosis, for both have a tendency to remissions and relapses, though in the case of multiple sclerosis a complete cessation of the symptoms is very much rarer than in syphilis; the peculiarities of speech, the nystagmus, the intention tremor, will in nine cases out of ten help us to recognize multiple sclerosis.*

Multiplicity of symptoms in syphilis need not imply that all the lesions are coexistent. We know that the syphilitic morbid process may at any one time give rise to a transitory hemiplegia, or to distressing headaches, three months thereafter to ocular nerve palsies, and a year later to spastic spinal symptoms. I wish to insist on this special point, because it is often overlooked.

With these characteristic signs of cerebro-spinal syphilis in mind, let us proceed to ask whether there are any special symptoms which have a sufficient pathognomonic value. In a general way, it may be said that syphilis produces symptoms that are not likely to occur in the middle term of life from any other cause. Apoplectic seizures in the absence of cardiac renal disease are always suspicious. Persistent headaches and epileptiform seizures have, under the same conditions, a similar value. Spastic paralytic symptoms of the lower extremities that do not follow upon injury to the spine or other tangible cause, such as bone disease, are also suspicious, particularly if they occur in adolescence or in middle life. But of far greater value than all these other symptoms is the peculiar behavior of the pupils. If syphilis is clearly written upon the skin, as has been well said, it is still more clearly visible in the pupil of the eye, and this is true not merely of the behavior of the pupils in the presence of other manifestations of syphilitic disease of the nervous system, but also at times when all other signs of such disease are wanting. A close study of many years with reference to this special point has led me to attach more importance to the behavior and condition of the pupils in syphilitic disease than to the peculiar bone manifestations, or that rather notorious epitrochlear gland after which we go so often on a still hunt. I would even venture to state that I have more frequently had reason to suspect and to prove the presence of constitutional syphilis from a study of the pupils than from any other symptom that the patient may have presented. The peculiarities to which I refer are these:

First, inequality of the pupils—one contracted, the other dilated.

Second, unequal responses—the one reacting to light, the other failing to respond.

Third, the complete immobility of the pupils both to light and during accommodation. The Argyll Robertson pupil, though so characteristic of tabes and of paralytic dementia, is not necessarily typical of syphilitic disease. The complete immobility of the pupils as evidence of syphilitic disease has the sanction of no less a name than that of Jonathan Hutchinson, but the knowledge of its great value has not entered sufficiently into the general literature of the day.

Fourth, and this I would add with some diffidence, marked departure from the normal form in cases in which there has been no previous tabes. These irregular contractions become more apparent when the pupils are made to contract by the usual stimuli. I will not

* See an article by the present writer in *Journal of Nervous and Mental Disease*, 1898, p. 320.

deny that this is met with at times in persons in whom other syphilitic manifestations are entirely wanting, but it is so much more common in syphilitics that it has been of sufficient value to me to lead me to suspect syphilis in very many persons in whom, on further investigation, I have found ample corroboration of the diagnosis. If you would suspect or prove the presence of syphilis when it is not too clearly written upon the skin, do not fail to study the pupils.

One of the ablest writers on syphilis of the nervous system* states that the diagnosis rests chiefly upon proof of a preceding luetic infection. It is not my purpose to deny the weight of such evidence, nor to under-rate the famous triad of symptoms which we owe to Hutchinson, or those which have been more recently enumerated by Silex. The latter attaches much importance to a form of chorioiditis areolaris, to the linear scars about the mouth, and to the well-known changes in the upper incisors. For many years since the publication of my first article on the subject, I have endeavored to show that the diagnosis should be made independently of such evidence, and I now believe that it can be done with as much certainty in syphilis of the nervous system as with regard to tuberculosis or sarcoma in any part of the body. Aside from the symptoms before enumerated, there are several symptom groups which follow so frequently upon invasion of the central nervous system that their appearance suggests the probability of constitutional syphilis. It is generally known that chronic, diffuse headaches in an otherwise healthy individual, continuous for days, but often intermittent, possibly worse at night, but not necessarily so, yet dependent largely upon the position of the head, are of syphilitic origin. It is not so well known that vertigo, which may be dependent upon a lithæmic state, and is often attributed to disease of the ear, to ocular insufficiencies, and the like, is also likely to be one of the early symptoms of cerebral syphilis. If such vertigo occurs in middle life, this fact should not be lost sight of.

I can well remember the case of a Canadian physician who had traveled the world over to find out the special cause of a vertigo which made life almost intolerable. It was unaccompanied by headaches or by any other of the well-known general symptoms of cerebral or spinal syphilis, but he had unequal pupils; the one was mobile to light, the other responded faintly, and as every other treatment had utterly failed, I concluded that a specific endarteritis, with a resulting disturbance of cerebral circulation, might be the cause of this vertigo, and was gratified to find that it disappeared within a few weeks upon a vigorous antisymphilitic treatment.

Single epileptoid seizures, transitory hemiplegias, and transitory motor aphasias, if they occur in the absence of renal disease, may well be suspected to

be due to this cause. With regard to apoplectic attacks occurring in middle life in persons who have neither renal nor cardiac disease, the apoplexy may safely be attributed to syphilis, particularly if the onset of the symptoms is entirely in keeping with the supposition of a thrombosis of one of the larger vessels, for this thrombosis is the usual accompaniment of a specific endarteritis. With regard to these brain symptoms, it is hardly necessary to state that they are sufficiently explained by the assumption of a chronic, diffuse leptomeningitis, of gummata, or of specific disease of the blood-vessels. The base of the brain is most commonly affected, and here again the lesion involves by preference the interpeduncular space, whence it follows that the optic nerve and ocular motor symptoms are altogether the most common. A lesion in this vicinity will naturally cause marked disturbance of vision, due, as a rule, to optic neuritis; and ocular motor palsies, due to involvement of the third and fourth nerves. The ocular palsies may be transitory or permanent; they may have the characteristics of the nuclear lesion, or may bear all the signs of a complete palsy. Anatomic investigations on this point have shown that syphilis may lead to degeneration of the ocular motor or other cranial nerve nuclei, but what appears to be a nuclear palsy has been shown to be due to a syphilitic infiltration of the extra cranial root fibres of the third nerve, this infiltration choking some of the fibres without invalidating all. It seems to me, therefore, to be important to know that presumably nuclear palsies may be, and often are, of specific origin. This partial affection of the cranial nerve roots has led to many a misunderstanding. I have seen partial affections of the trigemini which have disappeared promptly upon the exhibition of the iodides in persons with undoubted specific histories, and, stranger still, were cases of hypoglossal disease of specific origin. I have in mind a particular patient in whom this lesion, as evidenced by an atrophy of both halves of the tongue, was recovered from, although the spastic paraplegia in the same individual, due to the same underlying disease, persisted up to the time of death.

Syphilitic double optic neuritis deserves attention, for it is a symptom to which neurologists and ophthalmologists give great weight in diagnosing brain lesions. Examination of syphilitic brains in which the optic tracts and the chiasma are found swathed in a characteristic exudate, suggests the thought that in many cases it will be well to bear this possibility of a specific disease in mind before giving an absolutely fatal prognosis. Specific disease involving the optic chiasm is all the more interesting because it gives rise to disturbances of the visual field, which could hardly be explained upon any other supposition than that of a partial infiltration of the nerve fibres composing the chiasm and the optic tracts. Ocular nerve palsies of varying kinds are often among the earliest symptoms of tabes dorsalis, and many years ago I raised the ques-

* Oppenheim *loc. cit.*

tion whether some of these forms of tabes, beginning with ocular palsies, are not truly specific types of cerebro-spinal syphilis. If any of these basilar symptoms are associated with others which point to the involvement of distant parts of the central nervous axis, symptoms which could never be due to a single lesion, the suspicion of an underlying specific disease is raised almost to a certainty. It is indeed astonishing to find how often brain symptoms are associated with those pointing to disease of the lower or lowest portions of the spinal cord. In 1891* I described this special type of disease under the term of multiple cerebro-spinal syphilis. One of the cases upon which this type was based, was that of a woman who at one time exhibited cranial nerve symptoms and a paraplegia of the lower extremities from which she recovered, and later on developed all the symptoms of a tumor of the pons with other manifestations, which could only have been due to a simultaneous involvement of the dorsal and lumbar portion of the cord. The post-mortem examination revealed a broken-down gumma in the pons, and marked meningeal exudate around the oculo-motor nerves around the medulla oblongata, the cervical and lumbar portion of the spinal cord. No better evidence was needed that syphilis may affect simultaneously the brain and the spinal cord.

If we pass to a consideration of the special symptom groups due to syphilitic disease of the spinal cord, we shall find that recognition of these is a tolerably easy matter. Bear in mind, if you will, that the disease starts in the majority of instances from the meninges; that it affects the dorsal and lumbar portion of the cord more frequently than the cervical, and that the disease invades the lateral column much more frequently than the anterior or posterior regions of the cord; whence it follows that spastic and paralytic symptoms, which may be symmetrical, but often invade one side long before the other is diseased, are suggestive of spinal syphilis. If we also bear in mind that invasion is a gradual one, that it is not rapidly destructive, we can understand why these spastic and paralytic symptoms chiefly in the lower extremities may exist for a long period of time without any of those other signs which are so common in affections of the entire cross-section of the cord; and it is also clear why the paralysis may last for years before it becomes complete, and why the involvement of the vesical and rectal centres may lead to a slight involvement of the locomotive sphincters without causing a complete loss of control. Sensory symptoms, if superadded, may be of a slight kind. Erb has insisted that this spastic paraparesis with slight anæsthesia, and moderate rigidity with minimal involvement of the sphincters, is particularly characteristic of what he calls the syphilitic spinal syndrome. Nonne† has shown that this form may be due to a combined

systemic degeneration. I would insist, as I have in previous writings, that this is a form of syphilitic spinal-cord disease and not the only form. Syphilitic disease of the spinal cord causes sensory and atrophic paralytic symptoms often enough to make it uncertain whether it is wise to restrict the term syphilitic spinal paralysis to the spastic forms alone. It is natural to inquire why the lower levels and the marginal regions of the cord should be invaded so much more frequently than the cervical-dorsal segments and the central gray matter. It has been shown that the spinal arteries become very narrow in the lower dorso-lumbar regions; that the postero-lateral regions have a relatively scanty blood supply at all levels, and that while the vascular distribution in the spinal cord, according to Williamson, is unfavorable to the occurrence of hæmorrhage and embolism, it is distinctly favorable to thrombosis. The areas having poorest blood supply will be most likely to undergo softening and will be least able to resist the invasion of a meningeal infiltration. It will be seen at a glance that if a morbid process does invade the posterior portion of the cord, and if before so doing it compresses the posterior root fibres, the symptoms will closely resemble those of posterior spinal sclerosis. I would not urge this point were it not for the fact that the diagnosis of tabes dorsalis, with its unfavorable prognosis, is made altogether too readily whenever any of the symptoms due to lesion of the posterior half of the cord are present. I am firmly convinced that these cases of syphilitic pseudo-tabes can be distinguished from genuine tabes dorsalis, and in the former the prognosis is so much more favorable that the distinction has a distinctly practical value. It has been my experience that in these cases of pseudo-tabes syphilitica the disease often affects one leg long before it does the other; one knee-jerk is present, or only slightly diminished, while the other is already absent; the ataxic symptoms are often very slow to develop, indeed they are in many genuine cases of tabes dorsalis, and, above all, there are in these cases those general symptoms of cerebro-spinal syphilis which I need not now reiterate; though I repeat that it is just in these cases that the absolute immobility of the pupil in contradistinction to the Argyll Robertson pupil gives good reason to believe that what is supposed to be tabes dorsalis, is a syphilitic pseudo-tabes. In a number of such cases I have had the satisfaction not only of seeing a recovery from the accompanying ocular palsies, or a diminution in the reaction of the pupils—a thing which I have never observed in genuine forms of tabes—but I have also witnessed the return of the knee-jerk, even when it had been absent for a long time. I have also seen how many have been absent for a long time in the pseudo-tabes of syphilitic origin, and how they return after clinical fancy, but has been pointed out by my own observations made, among others, by Erb, Sachs, and myself.

Lastly, I might be expected to dwell upon the rela-

* This Journal.

† Nonne, *Arch. f. Psychiat.*, xxix, 3.

tion of syphilitic infection to posterior spinal sclerosis or tabes dorsalis. So far as statistical evidence is of any account, there is overwhelming proof that the two are related. Some years ago Strümpell made the point that posterior sclerosis was a post-syphilitic and not a true syphilitic disease; that the disease was due not directly to the syphilitic poison, but to the toxins which had been formed by this poison and remained latent in the body for a long time. The point has been seized upon with avidity by many writers, but I can not see that it places the disease in any other position than are many of the late manifestations of lues. The chief difficulty that we experience is not in attributing tabes to a preceding infection, but in explaining how this posterior spinal sclerosis may be caused by preceding syphilitic disease. This difficulty is increased by the fact that more recent theories with regard to tabes dorsalis have shown it to be of extraspinal rather than intraspinal region—in other words, that the disease is due to the fact that the posterior root fibres become primarily diseased, either by direct compression before entering the spinal cord, but more probably in consequence of the disease of their nutritive centres in the spinal ganglia, and that the posterior columns appear to be the main seat of the disease, simply because they are made up of the posterior root fibres entering into the cord. If it could be shown that the blood-vessels supplying these ganglia had been the subject of specific endarteritis, much would be gained, but such proof is not yet forthcoming. I am inclined to suspect, in spite of all opposing theories, that specific endarteritis of the spinal blood-vessels may have something to do with the early development of the disease, because in at least one cord which I have examined post mortem, I found distinct endarteritis of the blood-vessels in the midst of sclerotic tissue. Evidence has been adduced, by Adler,* for instance, that there may be disease of the blood-vessels in syphilis of the heart without any symptoms pointing to a cardiac affection; and so I believe that the relation between syphilis and tabes will not be satisfactorily established until a careful investigation of the condition of the blood-vessels of the spinal cord shall have been made in the earliest stages of posterior spinal sclerosis. From whichever point of view we may attack the problem of syphilis of the nervous system, the impression is forced upon us that the disease of the blood-vessels is a primary factor. I need not enter into the symptomatology of tabes dorsalis, but would express the caution that in persons who have been afflicted with constitutional syphilitic disease, the onset of a slight ataxia and a merely diminished response on the part of the patella tendon are suspicious of impending tabes; and if any good is to be accomplished by treatment, such treatment should be instituted before more serious symptoms are developed.

Were I to attempt a further description of syphilis of the brain and spinal cord, it would be necessary to give in detail almost every known symptom-group, and I should have to dwell on some points that are still in controversy. I have said nothing about the cervical types of spinal-cord syphilis because they are, on the whole, rather rare, and I have not referred to a special class of cases which have interested me, because they bear a remarkable resemblance to that rare affection of the spinal cord known as syringomyelia. Suffice it to say that whether the disease affect the cervical, the dorsal, or the lumbar portions of the cord, however much the symptoms due to the exact locality of the part affected may vary, the general symptoms will be the same; and among these the widespread yet moderate development of the morbid signs, showing that the disease is great in extent but slight in intensity, and the unusual variability of the symptoms, with a tendency to remissions and relapses, stamp the morbid process as one that is in all probability due to constitutional syphilis.

INTENTION: A STUDY OF THE BOVINE BRAIN.

BY WALLACE WOOD, M. D.

IF by chance the student or professional man should ever receive into his hands the brain of a bullock direct from the axe of the headsman, he will have occasion to note how full, round, and firm appears the occiput or posterior half, and how flaccid, empty, and pointed in shape appears the sinciput or anterior half.

One naturally asks the reason of this, and the answer would be that the posterior half of the cerebrum is the receiver and holder and the anterior half the transmitter and driver. The posterior, round and hard, is plumped full of impressions; years and years of memories are there stored up in innumerable folds, sights, and panorama slides; innumerable pictures of summers and winters past fill one section, while the corresponding noises, melodies, and voices fill another convoluted mass. Samples, minute yet true, of all the grass and hay ever eaten fill the taste compartment, while in the lowest coil are stored the odors of all the meadows and pastures and the smells of the woods and the marshes. The smell gyrus, indeed, in cattle or dogs, or in any mammal lower than a primate, may well seem to us poor microsmatics a marvel of development. This posterior half has also a full store of kicks and cuts, of pushings and pullings, of combings and carressings, of milkings and yokings, and a thousand forms of contact; and the all-powerful impressions of sexuality and parentality have also there a chamber or place. So it is no wonder the posterior half is round and hard and full.

On the other hand, the sinciput is not a storehouse of these rather worldly and substantial impressions. While the posterior half holds, keeps, combines, arranges,

*Observation on Cardiac Syphilis, *A. J. Med. Jour.*, Oct. 22, 1898.

and rearranges these samples of worldly goods, the anterior end, the point of the pyramid or cone, calls up and transmits the impression or combination required.

The functions of the posterior half are hearing, seeing, smelling, tasting, feeling, and passion; the functions of the anterior half are attention, intention, phonation, and action.

What is attention? Let us see. A bovine animal in the pasture hears a clatter and sees a glare: the crea-

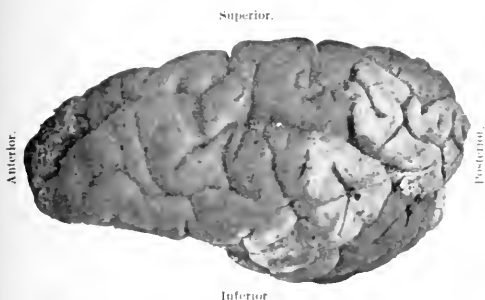


FIG. 1.—Left brain of an ox, exterior surface. The occiput or posterior half is large, full, hard, and well rounded; this is the receiver and store. The snout or anterior half is smaller, softer, and triangular, like the apex of a pyramid. High on the plate to the right is seen the serpentine eye gyrus, or store of sights, and below it, triangular in shape, the ear gyrus, or store of sounds. In the direction anterior-inferior is seen the great triangle or junction, the seat of the attention. Between this and the other parts lies the chasm or vortex of action.

ture stops and stands fixed, "all eyes and ears." What is happening? We may say that the concentrated or anterior end of the brain, the apex of the pyramid, is endeavoring, through the longitudinal or cogitational system of nerves, to call up all similar sights and sounds from the stores of the past in the posterior half and to unite them with the actual present impression. When this is accomplished and recognition is reached, the creature acts. He knows, for instance, that this clatter and glimmer means salt, and he rapidly moves toward the approaching sight and sound. Attention becomes intention, then action, accompanied very probably by phonation.

Where shall we locate these functions? The cerebral eye and ear—that is, the store of sights and sounds—have been found to be respectively the second and third gyri, posterior, counting from the upper margin. The eye gyrus in cattle has much the shape of a stamen, a serpent, or a stemma; it is double or cleft, however—that is, marked by a central groove or fissure. The ear gyrus below it curves sharply, forming a haunch, the temporal eminence, and this eminence, triangular always, with a central incision, bears a certain resemblance to the external bovine ear.

If, now, we place our pen or finger upon the two gyri and move forward across what appears to be a central chasm, and which must be the chasm of action or place of the descending current, we shall find our-

selves at a point of the anterior where the two gyri meet. This anterior junction then is to be regarded as the *locale* or point of attention. Association fibres from this centre must radiate to the eye centres, to the ear centres, to the smell and taste centres. This exterior point, then, is the central office, the seat where sits the man that *knows*. The bullock knows that this sounds like coming salt, looks like it, he knows it is salt.

Having *attended* to this, he now *intends* to obtain his share. Where shall we locate intention, where find or seek for that famous *boule*, *role*, that might of almighties for good or evil, the will?

Where is the *boule*? Where is the intention?

In making dry preparations of the brains of fifty cattle—male, female, juvenile and neuter—I found that the bull brain is distinguished by a highly developed prow or precan lobe, and this upon the mesial or inside surface. In other words, the bull has a tremendous cerebral development exactly *between the eyes*; while the brains of his sisters, the cows, have usually no such development of folds and fissures at this point, and his unfortunate brothers, the oxen or bullocks, if weighed in the balance as to their mesial precan lobules, will be found very much wanting.

That Taurus, the bull, when in full maturity and at the height of his power and splendor, is one of the noblest of the Creator's works all will concede; but what is that peculiar, that transcendent quality which, from the days of the pyramids of Egypt and the worship of Apis to the last days of Spanish rule in the West, has made this creature so respectable, so redoubtable, so admired and feared?

What is this bully good quality? Is it not the will, the intention, the *boule*? Whatever it is, I am strongly

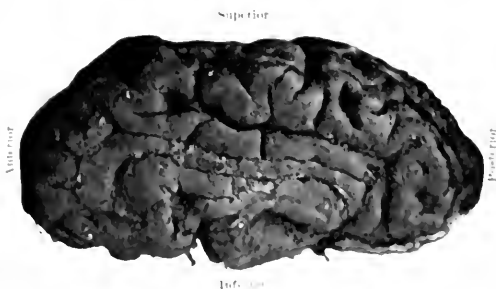


FIG. 2.—Right brain of a mature bull, exterior surface. The prow or anterior extremity is different from that of the cow. It is highly convoluted and highly developed.

of the opinion that the centre or point of attention is between the eyes, and that it is definitely placed upon the prow, the precan region, the precan lobe, of the mesial surface.

Once more, What is the quality of the bully good? For a moment look back to the beginning of this natural or wild state: the bully good quality will be seen

to be this: the intention, the determination to protect or defend.

It is the *boule*, the *volé*, the tremendous intention or determination.

What are your intentions? A question of vital importance if you stand in a lone pasture with this famous and formidable animal approaching you. *Where* are your intentions? is the question less vital, but not without interest, that you ask as you hold the left bovine semicerebrum in one hand and the scalpel in the other. And I should be inclined to answer, "In the prow." Observation seems to show that the brain of the male bovine tends to a procran development, and that of the female to a metopic development. If this is true, would it not suggest that the prow may be the seat of determination, intention, the *βωλῆ*, strong will, while the metopon is the gathering point of submission, willingness, *lunoia*?

RETENTION OF URINE.

By RAMON GUITÉRAS, M. D.

(Concluded from page 659.)

Treatment.—The treatment in retention of urine varies and depends upon the cause, form, and degree of the trouble, and may be divided into temporary palliative and radical methods. It is my intention here to consider the different forms from the standpoint of degree and cause.

In acute attacks of complete retention, generally spoken of as spasmodic, such as occur after operations, or in cases of fever or shock, it is simply necessary to insert a soft-rubber catheter into the bladder and draw off what we estimate to be two thirds of the urine present. If, then, hot applications are made over the pubes, the patient will probably be able to pass urine after an hour without difficulty. If he can not, he should be again catheterized at the end of five hours, and again every five hours, until he is able to urinate voluntarily.

In chronic complete retention due to paralysis, such as occurs in cases of transverse myelitis, the patient should be catheterized every six hours, care being taken at first not to empty the bladder.

In chronic complete retention due to obstruction, the treatment should be the same as in chronic cases due to paralysis, if this is possible. That is to say, a clean, soft-rubber catheter should be passed into the bladder every six hours and the urine drawn off. These cases are, however, almost always due to hypertrophy of the prostate, so that we should be obliged to use an elbowed soft-rubber or woven catheter. In such cases pain, irritation, and tenesmus are often so great that the catheter may have to be passed more frequently in order to give the patient relief. Internal urinary antiseptics, bladder irrigations of antiseptic solutions by means of the catheter, and, if spasmodic, the mouth or rectum should be given.

(Radical cure by means of enucleation or the Bottini operation may be resorted to.)

In chronic incomplete retention due to paralysis, the bladder wall is partially paralyzed, residual urine is present, and cystitis is liable to occur. Here the bladder should be catheterized once or twice a day, and a urinary antiseptic given internally. If cystitis is present in addition to this, we should wash out the bladder every day or two through the catheter with some antiseptic solution.

In chronic partial retention due to obstruction we have a very common condition, such as is usually seen in cases of enlarged prostate or tight stricture where residual urine is present. The treatment of the bladder in these cases should depend very much upon the amount of residual urine and the presence or absence of cystitis. If there is very little residual urine, and no cystitis, we should not pay much attention to the bladder, but should try to treat the cause. Strictures should be dilated if possible, and if they do not dilate they should be cut. Enlarged prostate may also be operated upon if the patient's kidneys are in good condition.

Acute attacks of retention, occurring in cases of chronic incomplete retention due to obstruction, are those most commonly encountered. They occur in men suffering from stricture or enlarged prostate, and are usually caused by cold or by excesses in eating and drinking. Here the patient suddenly finds that he can not urinate, although he has been able to pass a fair amount at frequent intervals for some time past.

This is a critical moment for him, as it is often here that his future woes begin. A case in this condition should be handled with the greatest care, as the bladder, and perhaps the ureters and the pelves of the kidneys are more or less distended or congested and in a favorable condition to be infected by catheterization.

There are also other dangers in relieving this first retention, or subsequent ones—viz., laceration, wounding or bruising of the urethra, production of a false passage by digging into the side of the stricture or into the prostate with hard and badly formed instruments, supercongestion of the urinary tract due to the engorgement of the blood-vessels after the bladder has collapsed, and afterward, perhaps fever and uremia due to septic infection and urinary absorption.

What, then, should be done in these cases to insure the safety of our patient and relieve the symptoms, at the same time exposing him to the least amount of danger? It appears to me that certain points are indicated—viz.: First, use palliative means; second, try to relieve him by harmless urethral instrumentation; third, if this fails, aspirate the bladder, and then again resort to palliatives until the congestion and edema have sufficiently subsided to allow him to urinate or to permit the passage of instruments.

Palliative means consist in giving the patient a hot sitz bath and a rectal irrigation of hot water. If this

does not stimulate the flow of urine an attempt should be made to pass the catheter. If this fails, the patient should be put to bed, with hot poultices over the pubes and perinaeum, and morphine should be given hypodermically. He should not be allowed to remain long in this position—not over two hours—as during this time the damaging influences of retention are going on. Catheter interference should then be resorted to again.

Catheter interference means a great deal, and it is by this means that infection is most often introduced into the bladder, in case it is not already infected, as there is no time when it is riper for it than at this moment of distention. The surgeon should therefore select with the greatest care the catheters to be used, and see that they as well as the lubricants are sterile. The hands of the operator and the genitals of the patient should also be as clean as possible, as this is an important surgical procedure for the patient, although it seems to be so simple to the practitioner.

In choosing the catheters they should be considered in this way: First, soft-rubber; second, woven, or gum elastic; third, metal. Of these, the soft rubber are the best and least irritating, as they are smooth and yielding, tending to follow the curves of the urethra and to slide over the prostatic hillock in case it is enlarged. There are two forms of these catheters, the straight and those with a bend near the end known as the elbow variety.

In the woven catheters, we have the straight, which taper toward the end, where they expand slightly to make a small rounded point, called the olivary tip, and the elbow variety above referred to.

If the retention is due to stricture, we should first try to insert a soft-rubber catheter. If this fails to pass, we should then try one of the woven variety with an olivary tip. These, of a small size, when well made, are very pliable, unirritating, and capable of passing through almost any stricture. If we do not succeed in passing one at first, it is well to inject a little warm oil into the urethra and then try again. If successful, we draw off what we estimate to be two thirds of the urine, and then put the patient to bed with hot applications over the pubes and perinaeum, and direct him to try to urinate again in an hour or two, when he will usually be successful in voiding some urine.

In cases of prostatic hypertrophy, we generally find a so-called middle lobe protruding into the urethra. Here we should use a soft rubber catheter if it will pass; and if we find that a straight one meets with resistance, we should not try to force it, but should instead try one of the elbow variety. These soft-rubber elbow catheters are very finely finished instruments, with a slightly turned up end. When this end reaches the prostate, the slant of the instrument corresponds with that of the gland, so that when it is pushed, it runs up over the lobe into the bladder. In some cases the prostatic urethra is tortuous, owing to enlarged middle lobes, and the middle lobe so enlarged that we must use a catheter with a

double bend in the end in order to enter, as with such a construction one bend adapts itself to the hillock and the other tilts it up still farther. These double-elbowed catheters have to be of the woven variety, as the rubber is not of firm enough consistence. Metal catheters can sometimes be passed in prostatic cases when softer instruments can not. They are not advisable, however, as they require force to make them enter and are apt to damage the tissues.

There is another variety of *stiff* woven catheters containing a stylet, which often enables the physician to pass the obstruction. It is done in this way: When the end of the catheter strikes the prostate the stylet is pulled out, which tilts up the end sufficiently to ride over the obstruction into the neck of the bladder. These catheters, however, are usually poorly made, hard, quite unyielding, and capable of doing considerable damage even in experienced hands. I do not recommend or advocate them. The soft-rubber and woven catheters are the best.

If a gum-elastic catheter can not be made to enter, a filiform should be tried, and if we are successful in passing this into the bladder and some urine escapes by its side, it may be left in place in the hope that the urine may drain off in this way; or, a metal tunneled catheter may be forced over it into the bladder, thus allowing as much of the urine to be drawn off as we desire. I do not advocate this latter procedure, however, unless it is considered desirable to operate immediately afterward.

It seems to me that in such a condition, whether a filiform has been introduced or not, if the patient can not pass his urine that there are but two things to do. One is to perform paracentesis, and the other to do a radical operation.

If paracentesis is performed, and what the surgeon estimated to be two thirds or three fourths of the urine is drawn off, it is probable that by keeping the patient in bed and resorting to the palliative methods already referred to, he will be able to urinate again in a few hours, if even in small quantities.

Of course, in a stricture of such a size that a filiform has to be resorted to, an operation is imperative, but, if possible, it should be postponed until the acute attack has passed, as the results are then better. A surgeon should always try to perform a perineal section on a guide, and for this reason it is advisable if possible to wait until the congestion about a stricture has sufficiently subsided to allow a filiform to be introduced over which a metallic guide can be passed. The strictures causing retention are generally tight ones, situated in the deep urethra, from five to six inches and a half from the meatus, and are frequently associated with false passages. My favorite method of operating in these cases is to introduce a Maisonneuve either with or without a guide, and cutting through the stricture by this means, after which I pass in a large sized guide and perform

an external urethrotomy upon it. This gives us a good smooth urethra, free from the hillocks that we occasionally find after an external urethrotomy alone has been performed, and besides this, there is not so much danger of wounding the bulb of the urethra. If a guide can not be introduced, the operation must be performed without one, but this is rarely the case if the surgeon treats his patient in a conservative way.

The question of radical cure of hypertrophy of the prostate does not enter into the question of an acute attack of retention occurring in case of chronic incomplete retention, as a surgeon would never think of performing an operation upon the gland for the sake of relieving the retention, as he might in a case where the obstruction was due to stricture. He might perform paracentesis at times, but he would go no further unless the attacks of retention were very frequent, the pain and frequency of urination so great, and the condition of the urine so bad that an operation was considered imperative. In this case the surgeon would have to choose between the Bottini method and prostatectomy. From my own personal experience I am free to say that I prefer the former, and under an anæsthetic and performed carefully, I think that it can be classed as a safe operation.

The Treatment of Other Conditions causing Obstruction.—The other obstructive causes that I have mentioned should be treated accordingly. A pedunculated tumor should be removed by a suprapubic cystotomy. A vesical calculus should be crushed by litholapaxy. In case a calculus is in the urethra, it should be pulled forward: if near the meatus, by means of an alligator forceps; or, if near the bladder, it should be pushed back by a sound. If it can neither be pushed backward nor pulled forward, it should be removed through a urethral incision and the wound then sewed up again. In such a case a perineal section should be performed for drainage. Displaced and fractured pelvic bones should be repaired by whatever means are indicated. In case of atresia or an impervious urethra at a certain point, the narrowing should be cut up to the same size as the remainder of the canal.

Extravasation of urine, due to whatsoever cause, giving rise to obstruction, should be treated by a perineal section and drainage, and by making incision into the tissues of sufficient size to allow the exudate to drain away. Abscesses should be treated in the same way.

In considering the palliative treatment of retention the question of catheterization and paracentesis have been frequently dealt with, and it seems to me that it might be well to say a few words on these two procedures.

The question of how to keep catheters clean was for a long time a puzzling one, but of late it has been much simplified by an improvement in the variety of catheters and the introduction of formaldehyde as a disinfectant.

I will briefly outline the methods pursued in my clinic and private practice.

Soft-rubber catheters should be washed, flushed out with hot water, by injecting in through them by means of a syringe, boiled for five or ten minutes, then dried with a sterilized towel, and afterward kept wrapped up separately in a towel or else stretched out upon it, or on a clean glass shelf.

Metal catheters and all other solid urethral instruments should be washed, wiped, and then boiled for five or ten minutes in either plain water or sodium solution.

Woven catheters of some *superior* makes can be boiled for five minutes in many cases on several different occasions without injury. This is, however, not safe, as it tends to melt the varnish with which they are made, thus making them brittle, and denuding them in places, or else leaving them in a sticky condition. They should be washed with soap and water, flushed out with warm water, dried with a sterilized towel, and then disinfected in a formalin sterilizer. Schering's formalin sterilizer is the one used.

It is a tin box, japanned on the outside, eighteen inches wide, eleven inches and a half high, and eight deep. It has three shelves of wire netting on which to place instruments, and a small compartment for the formalin lamp. A door opens in front, the size of which corresponds to the side of the sterilizer.

The method of disinfection is by means of the paraform pastilles. Paraform is polymerized formaldehyde and occurs as a light white powder, which can by means of heat be entirely converted into formaldehyde gas. It can be purchased in the form of pastilles of five to fifteen grains each. Formalin is a forty-per-cent. solution of formaldehyde.

The method of doing this in our sterilizer is as follows: The instruments are to be placed upon the wire shelves. A five-grain paraform pastille is to be put into the lower receptacle of the lamp (the upper cup is not to be used with the sterilizer), the lamp lighted, and the door closed. There is a small glass window in the door to allow the flame of the lamp to be seen. The outlet on the top of the sterilizer will facilitate the escape of the gas when the process is complete. The lamp will burn for twenty minutes in the air of the sterilizer, if empty, and only about five minutes are required for the entire vaporization of a five-grain paraform pastille placed in the lower cup.

Ten minutes' exposure to this gas in the amount obtained by the vaporization of a five-grain pastille will kill anthrax, tubercle, diphtheria, and typhoid germs, and streptococcus, staphylococcus, *Bacterium coli commune*, etc.

Aspiration.—When a catheter can not be made to enter the bladder, and a radical operation is not considered wise, paracentesis should be performed either through the rectum or over the pubes. This procedure is not without danger, as in the first case we are liable to

have a rectovesical fistula following, and in the second we may have an abscess in Retzius's space, or a general peritonitis.

Of the two operations, I believe that the suprapubic route is the preferable one. The point for the introduction of the instrument should be in the median line, just above the symphysis. The trocar should be pushed inward and downward for about three inches, and the stylet should then be withdrawn until what we estimate to be two thirds of the urine in the bladder has escaped. A piece of plaster should then be placed over the hole, and the patient put to bed.

Neither by catheterism nor by paracentesis should all the urine be drawn off from a patient's bladder, as fatal syncope has resulted from such a procedure.

Aside from this, the sudden emptying of the bladder produces a collapse of the distended urinary tract and a consequent engorgement of its surface. Within a few days the urine contains a little blood independent of mechanical injury; it becomes turbid and scanty; the temperature rises, the tongue becomes dry and brown, the mind unsettled, and the patient sinks into the condition known as typhoid. He becomes septic from urinary absorption; his kidneys become congested, resulting in uræmia and death.

In all cases of chronic, incomplete retention the treatment of the inflamed and atonic wall of the bladder is to be considered. A patient may live for years with a chronic cystitis, if his bladder is treated properly. This trouble is generally not curable, but few inflammatory conditions yield results to treatment more gratifying to both the physician and the patient.

The methods of toning up an atonic bladder are, by using remedies which will excite contraction of the bladder wall, such as strychnine, cold sponging, or douching over pubes, and counterirritation to the spine.

Civiale recommended cold-water injection into the bladder, beginning with tepid water and gradually decreasing the temperature to 60° F. This should be done after emptying the bladder. Two or three of these injections can be given one after another. These generally excite contractions, which once having begun will bring about favorable results. Two injections daily for a fortnight will usually cause marked improvement.

The faradaic current given by placing one pole over the lumbar or hypogastric region, and introducing the other into the bladder by an elastic bougie with a metallic tip, is often of great service. This should be moved around until it comes in contact with the different parts of the bladder wall for five minutes at a sitting. Various preparations, such as those of iron, strychnine, and other tonics, are recommended by different practitioners.

Prognosis.—The prognosis of atony and paralysis of the bladder depends upon the cause. In cases of spinal and cerebral lesions, if they are incurable, the local condition will not improve. In obstructive cases it is different.

In atony due to stricture, if this is cured, the bladder wall may be expected to regain its tone under appropriate treatment. In prostatic cases, however, the result is often not so favorable, on account of the age of the patient.

In all cases of paralysis or atony early attention to the condition of the bladder is of great importance, as the longer the urine is allowed to remain in contact with mucous membrane lining it, the more likely it is to excite disease; while the frequent and continued distention of the muscular fibres gradually renders them thinner, and diminishes their chance of ever being able to be restored to a healthy state by any treatment that can be employed.

23 WEST FIFTY-THIRD STREET.

INHIBITION.

By S. J. MELTZER, M. D.

(Concluded from page 703.)

As to the nature of inhibition, I shall briefly mention here only the one theory which was put forward and ably supported by Hering, Gaskell, and Biedermann, and which has already gained quite a firm hold. Hering has extended his theory of the perception of colors to all living tissue. There are in all living tissues, Hering assumes, two antagonistic chemical processes: assimilation and dissimilation, the building up of the tissue and its destruction. Any stimulus can affect the tissue either by increasing the dissimilation, which manifests itself, for instance, as a contraction, or it facilitates assimilation, which is then inhibition. Gaskell terms the antagonistic processes anabolism and catabolism.

Looking over the gradual development and growth of our knowledge of the inhibitory phenomena, we notice, in the first place, that the observations on the presence of inhibition were first made in organs or functions which are normally in a rhythmic, or arrhythmic, or tonic state of activity: in the rhythmically contracting blood and lymph hearts, in the rhythmic movements of respiration, in the arrhythmic peristalsis, and in the tonus of the blood-vessels. Inhibition simply presupposes preceding activity. In the resting, relaxed skeletal muscle inhibition can not manifest its presence. Nor can it be easily recognized in a muscle which is made to contract by a peripheral or reflex stimulus, because such a stimulus obviously favors contraction, and not inhibition. It has therefore been a very tedious task to establish unquestionable instances of reflex inhibition in the muscles usually at rest, and by methods usually employed to bring out reflex contractions. The situation, however, in my opinion, is strikingly changed since Sherrington discovered the condition which he terms "decebrate rigidity." The skeletal muscles are in a pronounced state of contraction, and a peripheral stimu-

lus brings out inhibition easily. Our usual conception with regard to the natural effect of a stimulus will undergo a change; reflex inhibition will henceforth stand on an equal footing with reflex contraction.

Another circumstance which has facilitated the establishment of inhibition phenomena is the occurrence of such nerve trunks as contain exclusively or prevalently inhibitory nerve fibres. The discoveries of the inhibitory effects of the vagus, the chorda, the splanchnic, and the laryngeal superior nerves preceded the discovery of other inhibitory phenomena, especially those of the reflex-inhibition variety. Without the inhibitory nerves the phenomena of reflex inhibition could hardly have been properly interpreted. We must, however, bear in mind that the discovery of the cardio-inhibition was made on the vagus of the frog, which contains also the augmentator nerve fibres, and that the inhibitory effect of the stimulation in this case is not so much the result of the presence of the inhibitory fibres in the nerve trunk in greater numbers, but is due mainly to the circumstance that when the augmentator and inhibitory nerve fibres are stimulated together the inhibitory effect prevails (Bowditch (133), Baxt (134)). This predominance, however, is not a special quality of inhibition; for if the chorda—which is the inhibitory nerve for the blood-vessels of the submaxillary gland—and the sympathetic are stimulated together, the result is not much different from what it is when the sympathetic alone is being stimulated. The predominance of one kind of an effect varies with the different organs, and is rather a part of the special mechanism in each organ than an inherent property of the inhibitory or the motor nerve. We may therefore say that the discovery was due to the accidental circumstance that, in the heart, inhibition is the ruling power.

The augmentator-nerve fibres have a long after-effect, and the cardio-inhibitory nerve fibre possesses only a short after-effect. When both nerve fibres are stimulated together the inhibition prevails during stimulation, but the augmentation is not destroyed or even affected. Therefore, when the stimulation is interrupted and the short after-effect of inhibition vanished, the long after-effect of the augmentator appears on the scene and runs its natural course. It was partly by the appearance of the long after-effect that the presence of the augmentor fibres in the vagus of the frog was recognized. The length of the after-effect, too, is not an integral property of either augmentation or inhibition; in the mechanism of the submaxillary gland it is the chorda which possesses the long after-effects, and this is revealed after the creation of the simultaneous stimulation. Let us add further that there are also differences in the lengths of the latent periods between the motor and the inhibitory nerves, which also vary with the mechanisms, and that the predominance of one kind of an effect over the other in a simultaneous stimulation is, after all, as has been shown by me (135) and by Hunt

(136), nothing but a resultant more or less in favor of one or the other of the two opposing factors.

Now there can be no doubt that in by far the most of the nerve trunks both kinds of nerve fibres are combined in all sorts of proportions and relations; and when we bear in mind that all our stimulations always mean a simultaneous stimulation of both nerves, what a variety of results we have to expect! But let us take up only this one possibility. Let us suppose that the motor nerve of a skeletal muscle contains motor and inhibitory fibres which possess exactly the same relations as we have seen actually to exist in the vaso-motor mechanism of the submaxillary gland—*i. e.*, the inhibitory nerve has a long and the motor nerve a short after-effect, and when both nerve fibres are stimulated together the motor effect will prevail, while there will be an inhibitory effect after cessation of stimulation. Now, what, under these circumstances, would be the effect of the stimulation of such a motor nerve? Exactly that which really takes place: soon after stimulation a contraction will follow, and after cessation of the stimulus a more or less rapid relaxation will take place. What proof have we against such a supposition? None.

Our knowledge of the laws of life had a one-sided development. The active manifestations of life aroused our curiosity; the phenomena of contraction, secretion, sensation presented problems and were studied. The absence of these phenomena was no problem. Rest of a muscle did not require an explanation. A muscle is at rest, it was implicitly assumed, when there is no cause for its contraction. Thus all the laws and conceptions which were formulated upon this one-sided basis are obstacles to the progress of the conception of inhibition. Had there been more such unbiased minds as that of Charles Bell, to whom vital arrangement for an active relaxation of the muscle was a self-understood requirement, inhibition would have been firmly established long ago. Or if an accident had only put into the hands of the earlier experimenters animals with “decrebrate rigidity,” inhibition would not have had such an uphill road to travel. Or if a criterion could have been found which would with certainty distinguish inhibition from its active opponent, the study of inhibition would have been an easier task. Fatigue, degeneration, regeneration, cold and heat, character of stimuli, responsiveness, poisoning with atropine, muscarine, physostigmine, etc., have helped in one or the other case to shed light on certain questions; but, so far, neither of these conditions and effects have been proved to possess a constant relation to either of the antagonistic phenomena.

All these difficulties and obstacles notwithstanding, inhibition can now, at its somewhat belated golden jubilee, look with satisfaction upon the long list of phenomena which have been gradually and laboriously gathered from all the provinces of life. In our record

we have seen that inhibition can be found in all the forms in which life makes itself manifest: motion, secretion, and sensation. We have found it present in all the irritable tissues of the body, plain and striated muscle, nerve cell, nerve, and epithelial cell. We have found it represented in nearly all the peripheral and central organs and functions of the body. Inhibition can be brought out by all kinds of stimuli applied to the skin, viscera, the peripheral or central end of a cut nerve, the subcortical and cortical centres of the central nervous system; and it is manifestly present in the voluntary and the involuntary activities of the living organism.

General Conclusions.—In the face of this ubiquity of inhibition, and in consideration of the manifold experience we have gathered with regard to its actual complicity in the manifestations of life, we are justified, it seems to me, in drawing the following fundamental conclusions:

1. Inhibition extends as far as the existence of irritability, and is an integral part of it. All irritable tissues of the living body respond to a stimulus with a specific activity, as well as with an inhibition of this activity; the actual effect of a stimulation is always only a resultant of the two opposing factors, but mostly, perhaps, with a greater leaning toward one or the other, according to external circumstances. Neither the impulse of activity nor that of inhibition is wiped out; they often run out their course in a manner imperceptible to us.

2. All the actual phenomena of life are not the pure manifestations of one of these factors, but are the resultants of the two antagonistic forces; there is no absolute rest in a living part, and there is no action without any admixture of inhibition. The state of life in each part of the body depends upon the general relations between the two antagonistic forces in the entire body, and upon the special relations existing in this special part. All admitted biological laws which have been formulated under the presupposition that they were being derived from a study of the behavior of the pure activity will have to be revised.

3. In the peripheral as well as in the central organs activity and inhibition are apparently separately accessible by special nerve fibres, of which the government of the body is making use in such a purposeful manner as to cause a required degree of inhibition of a part, the antagonist of which is ordered to action.

I believe that in my estimation of the extent and importance of inhibition I am, at least to a great extent, in accordance with those two eminent physiologists, Gaskell in England and Boedermann in Germany.

I am convinced that the dualistic conception of the phenomena of life is destined to make a profound impression upon medicine and therapeutics; and I am also profoundly impressed with the fact that the discovery and development of inhibition are among the greatest achievements in biology of the dying century.

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A LITTLE POINT OF GREAT IMPORTANCE IN TRANSFUSION.

By LOUIS JULIAN Y GENELLA, M. D.

NEW ORLEANS.

THE principal fear in transfusion seems to be the introduction of air. Ought this ever to occur? If the following method is adopted I do not think it is possible:

Cut down to the vein with the usual precautions and place three ligatures around it; the one farthest from the heart tie tightly around the vein. About half an inch above is passed the next ligature around the vein, but do not tie. Next put another ligature about three quarters of an inch above this second ligature and tie it tightly, but as a slipknot—i. e., tie by pulling on A (1, 2) and B (2), and when it is needed to untie pull on A (1) and A (2).



Make a free incision between ligature No. 1 and No. 2, and introduce the needle with the saline solution running at once so that it will pass under ligature No. 2.

As ligature No. 3 [A (1, 2) and B (2)] is tied, the fluid will flow out around the sides of the incision, thus washing out any air that could have got into the vein. While the fluid is still running tie ligature No. 2 around the instrument, and by pulling on A (1) and A (2) of No. 3 we again open the venous channel without danger of letting in any air.

LANDRY'S PARALYSIS.*

By W. H. HAYNES, M. D.

BROOKLYN.

THE disease known as Landry's paralysis may be considered, according to our present knowledge, as an infectious disease of the nervous system. Although no specific germ for it has as yet been isolated, others, such as the *Streptococcus longus* and the *Staphylococcus pyogenes aureus* and *cereus*, have been found in some cases, and it is accompanied, as are all infections, by an enlarged and softened spleen and enlarged mesenteric lymphatic glands. It affects mainly the anterior horns of gray matter of the cord, or at least the ganglion cells, though the white matter and efferent motor nerves are also involved. In some cases it is attended by more or less constitutional symptoms, such as we see in the different forms of severity of anterior poliomyelitis, may be ascending or descending, lasts from a few days to fourteen weeks, and its typical condition is one of flaccid paralysis of all the extremities, with loss of reflexes, little disturbance of sensibility, normal electrical reactions, sphincters uninvolved, rapid course, and universal fatality. This summary is the result of a study of forty-seven cases and the most recent literature on the subject. Such being its aetiology, pathology, symptomatology, and course, so far as at present determined, we turn to the more practical part of the subject, that of diagnosis and treatment.

The diagnosis of this form of sudden paralysis is attended by much difficulty, and in the study of the cases reported one gets easily confused by finding cases of multiple neuritis, acute poliomyelitis of adults and children, and polioencephalitis reported as cases of this disease. And even with the history and pathological findings the diagnosis is sometimes in doubt, as all these affections are coming to be considered of an infectious nature, and we are finding lesions of a similar character in the different parts affected. Still, ordinarily, we can usually distinguish the following diseases with which it may be confounded—namely, multiple neuritis, transverse myelitis, diffuse myelitis, disseminated myelitis, meningomyelitis, anterior poliomyelitis, and polioencephalitis—chiefly by the difference in the history, onset, course, and limit of the parts affected, in involvement of sensibility and the sphincters, and in results.

In multiple neuritis we have the history of the ingestion of some poison or a preceding acute infectious disease; though the onset is sudden, the course is slow, sensibility is involved, electrical reactions are lost, atrophy is present, it is without fatal issue, and results in cure after a tedious convalescence.

In transverse myelitis there is usually a history of an injury; pressure, preceding infection or syphilis, is localized, sensibility and the sphincters are involved, and there are atrophy and electrical changes.

* Read before the Brooklyn Pathological Society, April, 1899.

In diffuse myelitis there is a more wholesale presence of like constitutional and spinal symptoms to the foregoing, while in the disseminated form the spinal symptoms are the same, only scattered, according to the different foci involved.

In meningomyelitis there are early presence of muscular spasm, pain, fever, and other marked constitutional symptoms, and those of a meningitis preceding the development of the paralysis, together with cerebral symptoms in the cerebro-spinal form.

In the ordinary form of anterior poliomyelitis, as we see it in children and adults, chiefly by the limitation of the paralysis to certain groups of muscles, and in polioencephalitis, the cortex and cranial centres are implicated; while Landry's paralysis, as a rule, never involves more than the efferent spinal motor nerves, the anterior horns of gray matter of the cord, and the medulla. It is an exudative inflammation with cellular infiltration of the circumvascular sheaths, degeneration of the ganglion cells, and loss of structural elements, with or without degeneration of the anterior roots.

As a method of treatment (which, however, has thus far been universally unsuccessful), I could suggest, besides the use of the usual constitutional remedies, the trial of the antistreptococcic serum of Marmorek. I am prompted to make this suggestion by reading the results of the experiments of Homen, of the University of Finland, and his pupils, who experimentally infected animals with streptococcic bacteria and their toxins, and the resulting changes in the nervous system were strikingly similar to those found in Landry's paralysis, and also by the favorable results of its use in other forms of this infection, notably in erysipelas and those following the puerperium.

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ANTISTREPTOCOCCIC SERUM IN PUERPERAL SEPTICÆMIA AND PELVIC CELLULITIS.

By A. G. DEARDORFF, M.D.,

SAN FRANCISCO.

HAVING recently had some experience in the use of antistreptococcic serum, I feel impelled to report two cases in which this promising remedy acquitted itself admirably. As a result I have been led to believe that we have now in this agent a specific for puerperal and other infections, and that its field of usefulness will steadily widen.

CASE I.—On January 2, 1899, Dr. T. was called to attend a case of abortion, occurring before the third month. The uterus was emptied without difficulty, and the case progressed favorably until the fourth day, when a chill occurred, followed by a rise in temperature and pulsé rate, with a dry, brown-coated tongue, tenderness over both inguinal regions, and tympanitis, indicating, of course, a peritonitis, more or less circumscribed. The pulse rate ranged from 106 to 120 and the temperature from 101° to 104° F. For a time the patient appeared to do well under the usual treatment with good nursing, and convalescence seemed to be imminent. But the fever continued until January 16th, when it was decided to curette and irrigate under chloroform, which I assisted the attending physician to do. We found no *débris* within the uterine cavity, yet the fever continued, with nausea, loss of appetite, and tympanitis. On January 25th, nine days after the curetting, and a little over three weeks after the abortion, the thermometer registered 102.5° F. and the pulse rate was 115. While the symptoms did not indicate immediate danger, the stubborn character of the case caused us considerable anxiety. At that time a trial of antistreptococcic serum was considered, and accordingly, at 11 A. M., we administered thirty drops of the serum made by Parke, Davis, & Co.

At 2 P. M. the skin, which had been hot and dry, became moist. The temperature had fallen to 99.4° F., and the patient was sleeping quietly; she also rested well during the succeeding night. During the two days following the temperature remained normal, except on the night of the 27th, when there was a slight rise. A second administration of thirty drops of the serum on the morning of the 28th caused a decline to the normal temperature, from which time forward the patient convalesced uninterruptedly.

To me this was a most remarkable result. But, in looking over the history of the case, I am inclined to think it would have been better treatment to have repeated the injection at shorter intervals, although the effect of the first dose was so decided that it was not considered necessary to do so.

On January 24th a case of inflammation of the left ovary and tube presented itself to me. On examination, a swelling as large as an orange was revealed to the left of the uterus, which was very painful on pressure. There was evidence of gonorrhœal infection, and I therefore placed the patient in the hospital under the care of a nurse. At the time of her admission the temperature was 101° F. and the pulse 100; the tongue was coated. Despite the most careful treatment for three days, the patient's condition gradually grew so much worse that I was obliged to resort to morphine to secure rest. The swelling remained, and gave every indication that a pus cavity was forming. Having had so much success in the case previously referred to, I thought the serum might act well in this one also. At 9.30 A. M., on January 27th, I administered thirty drops of antistreptococcic serum (Parke, Davis, & Co.). The patient's temperature registered 102.5° F., and remained at this point until 2 P. M., although there had not been sufficient pain to require the use of opium since the previous midnight. I considered the serum a failure in this instance, and immediately gave five grains of phenacetine. The temperature dropped two degrees, but rose again to 102° F. at 5 P. M. The tongue, however, was moist, and the pain was not unbearable.

At 7.30 P. M. the serum began to manifest its effect.

The patient perspired profusely during the night and slept well. On the following morning the temperature reached the normal, the pulse rate had declined to 75, and the tongue was moist and clearing. To my great surprise, upon making a pelvic examination, I found that the swelling had been reduced to a third of its former size, and but little soreness remained. The patient at once began to eat well, and made a quick recovery, leaving the hospital a week later. This was one of those cases which ordinarily require at least two or three weeks' treatment, and often an operation to get them well. Under the serum treatment the abscess disappeared in forty-eight hours.

CASE II.—On April 5, 1899, I was called to a case of labor at full term. The surroundings were of the very worst—dusty rooms in a basement, dirty bed and bedding. The first stage was about over when I called. I hastily made preparation for the woman's delivery, which soon occurred, and without a nurse, only an elderly lady for my assistant. I took all precautions possible for cleanliness, but to no avail, as on the 8th, or the third day following delivery, she had a chill. The temperature a short time after was 103.5° F., pulse 125, and so profound was the poison that the patient was in a stupor, and there was every evidence of severe puerperal fever. I immediately irrigated the uterus with lysol water, but found nothing in the organ in the nature of retained placenta. I did, however, find a fermented condition of the lochia. I administered the first day sixty minims of antistreptococcus serum. In a few hours profuse perspiration came on. The temperature fell by midnight to 101° and the pulse to 100. The next morning I again administered sixty minims of serum. The temperature rose after a second slight chill to 102°, and the pulse to 115, but for only a few hours, when the temperature fell to 100°. In the evening of the second day I administered sixty minims of serum, and I then had my case completely under control. On the morning of the third day of the fever the pulse was 80, the temperature 99.8°, and she had begun to improve, having slight returns of fever, but by administering thirty or forty drops of serum, as the fever came on for three or four days, it was checked. I would not under any circumstances be without antistreptococcus serum in puerperal troubles, and in any and all blood poisonings I feel we have a wonderful help in its action.

There is a wide field for the employment of antistreptococcus serum in all inflammations of a septic nature, and from my experience I can affirm that its action is rapid and sure. I have used it in certain bad cases of tuberculosis, exhibiting pus in the sputum, always with marked benefit. Other physicians in this city have used it successfully in the treatment of cases of puerperal fever, in which the older means of treatment had failed and the patients had been given up to die.

The dose generally recommended is larger than those which I used, but I consider thirty drops, often repeated, better than a larger dose; at least, my small doses did all that was necessary to be done.

The Seaboard Medical Association, of Virginia and North Carolina.—The president, Dr. Lucien Lofton, announces that the next meeting will be held in Newport News, Virginia, in January, 1900.

Therapeutical Notes.

A Paste for Trichophytosis Barbæ.—Dr. Menahem Hodara, of Constantinople (*Monatshefte für praktische Dermatologie*, May 1st), has made considerable use of the following formula:

R Lanolin, $\frac{1}{2}$ each	20 parts;
Vaseline, $\frac{1}{2}$	
Glycerin	10 "
Sugar	20 "
Sulphur	10 "
Zinc oxide	20 "

M.

He has employed the paste satisfactorily in various skin diseases, but finds it particularly effective in the treatment of sycois. It is applied in a thick layer night and morning. When the pustules have fully dried up and the crusts have all been removed, it is sufficient to apply it at night only.

Arsenic as a Corrigent of Thyreoid Medication.—*Lyon médical* for April 23d cites Dr. Léon Mabilie, of Reims, as having found that Foyler's solution, in daily amounts of from five to fifteen drops, prevents the tachycardia, the nervous derangements, and the loss of flesh that are apt to be occasioned by the thyreoid medication.

The Administration of Creosote.—The *Gazette hebdomadaire de médecine et de chirurgie* for April 23d attributes the following formula to Kopp:

R Beech creosote, $\frac{1}{2}$ each	1 part;
Benzoin, $\frac{1}{2}$	
Powdered charcoal	6 parts.

Powder the benzoïn, triturate it for a few minutes with the creosote, and add the charcoal gradually. This powder is said not to soil paper. It is to be taken in wafers.

Pills for Ovarian Neuralgia.—The *Medicinisch-chirurgisches Central-Blatt* for April 14th publishes this formula as J. S. Martin's:

R Extract of belladonna	33 grains;
Extract of stramonium	43 "
Lactophenine	90 "

M. Divide into twenty pills. Two or three to be taken daily.

Baccelli's Powders for Influenza.—In cases in which the fever and the nervous symptoms are severe Baccelli (*Gazzetta degli ospedali e delle cliniche*, 1898, No. 43; *Centralblatt für innere Medizin*, 1898, No. 38; *Medicinisch-chirurgisches Central-Blatt*, April 21st) recommends the following formula:

R Quinine salicylate	3 grains;
Phenacetine	24 "
Camphor	$\frac{1}{10}$ of a grain

M. Six such powders may be taken in twenty-four hours.

An Antiseptic Suppository.—According to the *Riforma medica* for May 3d, Wasshew recommends the following:

R Pyocetanin	$\frac{1}{10}$ grain.
Extract of belladonna	10 "
Cacao butter	30 grains

M.

For one suppository.

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THE AMERICAN MEDICAL ASSOCIATION.

THE association, as everybody knows, is soon to hold its annual meeting. It is to be hoped that before the time for the meeting arrives the influential members will have considered certain suggestions that appeared in the May number of our valued contemporary *Medicine*. That journal points out that when the association was organized the great majority of the profession lived in the Middle and Eastern States, so that it was comparatively easy and convenient and inexpensive for the members from all parts to assemble in any city large enough to accommodate them. This long ago ceased to be the case. The medical profession of the United States is now spread over a vast territory, and its plan of holding annual meetings first at one remote point and then at another is not at all in conformity to the theoretically representative character of the organization. It is a hardship for a Pacific coast man, for example, to devote the necessary time and money to a meeting held in the East, and *vice versa*. The busy practitioner can not do it as a rule. The result is that the meetings, when they are held in places far distant from the great mass of population, are too apt to be made up largely of men of leisure so far as the great constituencies are concerned.

Medicine suggests that these defects would be lessened by a division of the association into several large geographical branches which should meet annually at places convenient to themselves, while the entire organization should hold biennial or, better, triennial meetings in some large city near the centre of the territory constituting the United States. Perhaps it would be well to hold the triennial meetings—for we agree that once in three years would be better than once in two—in several central cities in turn, perhaps Chicago, St. Louis, Kansas City, and Omaha. The order of rotation should be settled definitely and never departed from save for some extraordinary reason. We are convinced that some such arrangement would prove beneficial to the association. We must not be understood as imputing all this to *Medicine*; we have simply taken our inspiration from our contemporary.

THE X RAYS IN A NEW LIGHT.

THE *Practitioner* for May contains an article by Mr. Edmund Owen on Fractures—in the New Light, in which he calls attention to the widely increasing use of the X rays by the laity for the purpose of ascertaining the results of surgical intervention in injuries, especially fractures. He begins with the account of a case of a man of fifty-three who was treated in St. Mary's Hospital, London, for a fracture of the right femur just below the lesser trochanter. The utmost difficulty was experienced, in spite of constant care and attention, in keeping the fractured surfaces in apposition, the upper fragment being persistently flexed and adducted; and consolidation, when finally attained, was in a bad position. Five months later the patient again broke the same femur about two inches below the site of the former fracture, but this time the treatment was devoid of difficulty and in every way satisfactory in its result. A skiagram shows the results of the two fractures, in the first of which the deformity is obvious. On this Mr. Owen remarks: "Let us suppose that this man had some ignorant, officious, and interfering friend who had taken him to a radiographer and paid for an X-ray picture of his thigh bone; that they showed the picture to some medical man and asked what he thought of it, and that the medical man said—which he might well do—that he should not care about turning out a broken thigh bone like that! Then let us suppose that a pushing solicitor is asked his advice, and that in due course an eloquent barrister exhibits the thigh bone and its treatment in all their nakedness, as it were, to a sympathetic jury—it might be of little avail that I pleaded that I had brought 'a proper degree of skill and care' to bear on the case, and it is not at all improbable that the man would leave the court victorious in an action for malpraxis."

It would appear obvious that with the accessibility of these X rays to the public at large there is a great and real danger that many a patient who may have no real reason to complain of the results attained in his case, which are possibly as perfect as care and skill exercised under adverse circumstances could make them, may yet be moved thereby with excess of pity for himself over some defect resulting from injury of which he would have remained unconscious save for the rays. Still greater is the danger from officious friends, inconsiderate or malicious *confrères*, and shyster lawyers.

It is evident, therefore, that it behooves practitioners to recognize and prepare to meet this new menace—for even though an action for malpractice fail, who

shall repay the practitioner for the worry, anxiety, and loss of time and practice entailed, or reimburse him for the expense? Mr. Owen suggests as precautions to minimize this danger: 1. A thorough and careful examination under an anæsthetic whenever inspection is at all wanting in decisive clearness of the information it affords. 2. A consultation whenever there is the least uncertainty. 3. If necessary, the practitioner should urge resort to a skiagrapher by the surgeon before dealing with the injury, instead of risking a surreptitious visit to one subsequently with the X ray as the surgeon's enemy instead of as his ally.

This latter course, however, owing to the injuries which have from time to time followed the application of the X ray, is not altogether free from the possibility of adding dangers of its own, and so may increase the physician's burdens instead of mitigating them. The X ray may thus prove doubly a traitor.

The author accordingly caps his advice with a recommendation that every practitioner should become a member of the Medical Defense Union, an association in England which investigates all charges of a professional character brought, or threatened to be brought, against any of its members, and if it finds the physician's case worthy of support takes all the worry and expense of his defense off his hands. Further, this society has in many instances, by showing a firm and decided front, upon examination of a physician's case, quashed and rendered abortive threatened proceedings, whether of a blackmailing character or sincere, but unfair and misjudging. It would be a good thing if every State in this Union should form such a defense league. In most States the fees need be but small, for the moral support which such an organization would afford would soon bring it to pass that blackmailing suits would have little in them for disreputable lawyers, while those that were the result even of honest conviction would more often than not be reasoned out of further progress.

Mr. Owen's final words express sentiments which can not be too often or too forcibly impressed upon every member of the profession. He says: "Lastly, in connection with the mistakes, failures, or imperfect results turned out by brother practitioners, it is our duty to be extremely charitable, and never to pass a hasty adverse judgment upon their handiwork; for it is just possible that when the case was first seen it was surrounded with difficulties of which at that time we can know nothing, and that the care and skill bestowed on it were worthy of a better issue. To judge merely by a result may be equally unfair and uncharitable."

THE ALLEGED CONTAGIOUSNESS OF LEPROSY.

WE have long been convinced that the doctrine of the contagiousness of leprosy was fallacious, and we have deprecated the newspaper attempts that have been made from time to time to create a panic in the community by dilating on the outrageousness of allowing a leper to remain "at large" in New York. That the great majority of physicians who have properly studied leprosy coincide in this view we have not the slightest doubt. This is shown by their absolute fearlessness in the presence of the disease. For example, for quite a number of years past it has not been a very uncommon thing for a leper to be stripped and examined minutely at a meeting of the New York Dermatological Society. That society's meetings are held, with an occasional exception, at the residence of some one of its members, under the same roof with the wife and children of the member, and yet these clinical demonstrations of leprosy have given rise to no anxiety, and no harm has come of them.

However, all this is negative evidence only, and would be overturned by a single instance in which leprosy was conveyed by contagion. We are using the word contagion, of course, in the sense in which the public understands it, and not as including inoculation, for we do not question that leprosy is inoculable. The difference is very clearly expounded in the *Medical Age* for May 10th, in an article entitled *Leprosy is Most Certainly Not Contagious*, by Dr. Roger S. Chew, late sanitary and chemical analyst to the Calcutta municipal corporation and assistant to the health officer of Calcutta. Dr. Chew describes himself as "a staunch American" and "a very bigoted one," so that he "can not be accused," he says, "of posing as John Bull's apologist" if he denies that the British government was prompted by interested motives when it stood up for the non-contagiousness of leprosy at the Berlin conference.

As regards the treatment of lepers, with the purpose of preventing or restricting the spread of the disease, we favor their segregation, but this does not argue that we are at all wavering in our disbelief in the contagiousness of leprosy, still using the word contagiousness in its popular acceptance. It is no argument, says Dr. Chew, to contend that because Verneuil favors isolation he is dishonest in his profession of belief that the disease is not contagious. "His long experience," Dr. Chew continues, "tells him how prolific lepers are and how they are afflicted with an insatiable sexual hunger. He knows that they are men and women whose natural passions and sentiments of anger, etc., have been aggravated fear-

fully by disease, and that a blow or bite from any one of them will cause the non-contiguity" [non-continuity?] "of surface necessary to inoculation. He knows that isolation—meaning separation of the sexes—precludes the possibility of procreation, and therefore, so I presume, advocates segregation with a view to utterly prevent the transmission per heredity of lepra. He hints as much in his letter to Leloir, and to make it more definite he says leprosy is 'not contagious from man to man.'" There are other interesting points in Dr. Chew's article than those we have touched upon, and we commend it as a whole to those of our readers to whom it may be accessible.

A CLUNSY PIECE OF TOUITING.

AN esteemed correspondent has recently called our attention to an exceedingly "yellow" puff of Dr. John B. Murphy's nitrogen treatment of consumption, in the *Chicago Evening Post* for March 28th. It will be remembered that Dr. Murphy explained his method and set forth his ideas on the subject at last year's meeting of the American Medical Association, in Denver, and, if we are not mistaken, he is to report further upon it at the approaching Columbus meeting of the same body. Soon after the Denver meeting we called attention to the ingenuity of the plan, but expressed our doubts as to its wide applicability. Like all other alleged advances in therapeutics, it will have to stand or fall on the strength of a far more ample experience than it has yet stood the test of. Newspaper puffery will prove of no lasting avail; indeed, it is far more likely to hamper Dr. Murphy in his endeavors to get at the truth in the matter. He is too bright a man not to understand this; hence we decline to believe that, as has been suggested, this horrible article was inspired by him or even prepared with his knowledge. To be sure, the writer professes to quote Dr. Lemke's precise words, but, while we can conceive that an admirer of Dr. Murphy's might let his enthusiasm so far get the better of his judgment as to lead him to consent (while whispering he "would ne'er consent") to the publication of an article comparable in drift to the *Post's*, we can not admit that any man whom Dr. Murphy could tolerate as a professional associate would use such absurd expressions as the article attributes to Dr. Lemke. Whatever may be the merits of the nitrogen treatment, we trust the *Post's* sensational exposition of it will not prejudice the American Medical Association against it; most assuredly it can not impress any right-minded medical man in its favor.

DIONIN AS A CALMATIVE.

THE difficulty of avoiding the use of objectionable narcotics in chronic diseases accompanied by cough, for example, is well recognized and regretted. If there can be found a substitute that is not likely to prove injurious in the long run, a distinct gain will have been made. Dr. G. Schröder (*Therapie der Gegenwart*, 1899; *Centralblatt für innere Medizin*, April 29th) thinks that dionin will be found to answer the purpose. He describes it as a hydrochloride of the ethyl ether of morphine, soluble in ten parts of water, and not offensive

to the taste. The dose is the same as that of codeine, and Schröder finds that it is quite as efficient as that alkaloid in allaying cough and procuring sleep, but not so effective as morphine in cases of actual pain, as in the painful deglutition attendant on tuberculous disease of the larynx. It is said to have no unpleasant effects, but all such statements concerning a new drug must be taken with caution.

THE STANDARDIZATION OF FLUID EXTRACTS, ETC.

WE have received from one of the leading pharmaceutical manufacturing establishments of the country a communication which seems to us a most convincing argument in favor of extending the standardization requirements in the forthcoming revision of the *United States Pharmacopœia* to belladonna, colchicum, conium, gelsemium, hyoscyamus, ipecac, physostigma, podophyllum, stramonium, and veratrum. It seems unnecessary to present the reasons why this is desirable, for we do not doubt that they are recognized by every physician and every pharmacist by whom pharmacology has been adequately studied.

THE CHICAGO BOARD OF HEALTH'S GOOD WORK.

IT appears from figures lately published that the Chicago death-rate has been decreasing steadily for a number of years to such an extent that, whereas the average age of those who died in 1872 was a little over fifteen years, in 1898 it was over twenty-nine years. We do not doubt that this is in great measure due to the admirable work of both the city board of health and the Illinois State board.

PROLONGED HOT BATHS IN THE TREATMENT OF TETANUS.

MUCH as it is to be expected from the serum treatment of tetanus, it is not wise to give up the quest for other remedial measures for combating this terrible disease. Dr. Ribos Perdigo (*Revista de Medicina y Cirugía Prácticas*, February; *Giornale internazionale delle scienze mediche*, April) thinks that the chief value of the serum treatment will turn out to be as a prophylactic, and he has found prolonged hot baths efficient in the treatment of the actual disease. The temperature of the bath, he says, should be varied according to the state of the patient, but as a rule it should be about 97° F. The bath acts as a general sedative to the nervous system. Ordinarily each bath should last from two to four hours, sometimes longer, and the intervals between them should be as short as the state of the patient's strength will admit of. Along with this treatment all precautions should be taken to protect the patient against noise and other exciting influences.

THE BOHEMIAN TWINS AND THE TWO-HEARTED NEGRO.

IN the *Indian Medical Record* for April 12th we find an editorial paragraph entitled Which is the Most Wonderful Human Curiosity Now Living? The writer describes two young Bohemian women whose bodies are joined back to back, and goes on to say that until quite recently there was living in New Bedford, Massachusetts, a negro named King who had two separate hearts and two breastbones, but was "without the diaphragm, or muscular partition which separates the thorax, or

chest cavity, from the abdomen." King is further said to have "lived to upward of a hundred." From all this we deduce that King, if he ever existed, is now no more, and we wonder why our esteemed Indian contemporary treats him as a "curiosity now living." We suspect that what is said about King was taken from some newspaper, for surely the *Record* would not think it necessary to define the diaphragm and the thorax for its readers' benefit. Can any of our readers furnish trustworthy information concerning the negro in question?

THE DEGREE OF DEVELOPMENT OF A FETUS PAPYRACEUS AS SHOWN BY THE RÖNTGEN RAYS.

UNDER certain circumstances it may be important from the medico-legal point of view to ascertain the stage of development at which the fetus perished. According to M. Bouchacourt (*Obstétrique*, March 15th; *British Medical Journal*, April 29th), this can be accomplished by means of a Röntgen-ray examination, for the skeleton shows no sign of absorption even when the soft parts have almost disappeared. Some of the bones, however, are apt to be fractured, especially the ribs and the clavicles.

MUSCULAR ATROPHY OF THE SKIN.

At a recent meeting of the Moscow Venerologico-dermatological Society (*Monatshefte für praktische Dermatologie*, May 1st) Dr. Pospelow showed a patient affected with what Jadassohn termed anetoderma erythematosum. Pospelow proposed for the disease the name of purpura atrophicans, but, inasmuch as, on microscopical examination, he found the affection to be due to chronic inflammation of the walls of the blood-vessels, with absence of elastic tissue, it may be that his purpura atrophicans is the same thing as Mackenzie described, so long ago as in 1883, under the name of vascular purpura.

THE PER CAPITA CONSUMPTION OF ALCOHOL IN VARIOUS COUNTRIES.

In the *Journal of the American Medical Association* for May 13th there is a letter from Dr. T. D. Crothers giving an account of the recent international congress against the abuse of alcohol. It seems that a statistical table was presented showing that a larger quantity of spirits, including wine and beer, was consumed per capita in France than in any other country, and the smallest quantity in Canada. The table "was given as authentic," but it seems to us that the figures may be misleading, for, although a great deal of wine is drunk in France, the French are among the soberest peoples of the world. Much depends on what is meant by the word "consumed." Great quantities of crude spirit and inferior wine are sent to France to be "doctored" for exportation. It would be interesting to know if this is reckoned as "consumed" by the people of France.

THE PHYSICIAN IN GENERAL LITERATURE AGAIN.

THIS time it is a woman, Eugénie R. Elisen, M. D., said to be a Roumanian lady practising medicine in New York. Her little book, entitled *Satan's Hoof and the Two Witches*, is published in Boston, by the Banner of Light Publishing Company, which publishes "the oldest journal in the world devoted to the spiritual philosophy." A sad but simple story, which came in

itself, forms the skeleton on which the author displays the amazing productions of her fancy. As they relate largely to matters of science, there is some danger that ill-instructed readers may take them as a serious exposition of accepted doctrine, but this of course is not the author's intention. Dr. Elisen's style of writing is vivid, but it is marred by many a slip in English. If our fair colleague ventures again into the field of *belles-lettres*, we should advise her to have her manuscript revised by somebody who knows the English language thoroughly.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending May 20, 1899:

DISEASES.	Week ending May 13.		Week ending May 20.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	26	6	12	8
Scarlet fever.....	171	14	196	14
Cerebro-spinal meningitis.....	0	9	0	8
Measles.....	377	18	438	18
Diphtheria.....	175	26	219	25
Croup.....	12	6	13	10
Tuberculosis.....	199	161	170	141
Small-pox.....	1	0	1	0
Chicken-pox.....	37	0	32	0

The Annual Meeting of the American Medical Editors' Association will be held in Columbus, Ohio, on Monday, June 5, 1899, the day immediately preceding the opening of the annual meeting of the American Medical Association.

Dr. Thomas H. Hawkins, of Denver, is president, and Dr. Dillon Brown, of New York, secretary.

The association, in addition to the transaction of routine business to come before the body, will listen to a paper entitled *The Ends and Aims of Medical Journalism*, by Dr. J. D. Emmet, editor of the *American Gynecological and Obstetrical Journal*. In addition to this, the committee have proposed a brief collection upon the subject *The Editor and the Author—The Rights of Each as Regards Contributed Articles*. The committee has requested Dr. G. H. Simmons, editor of the *Journal of the American Medical Association*; Dr. J. Riddle Goffe, editor of the *Medical News*; Dr. G. M. Gould, editor of the *Philadelphia Medical Journal*; Dr. J. C. Culbertson, editor of the *Cincinnati Lancet-Clinic*; and Dr. Dunbar Roy, editor of the *Atlanta Journal-Record of Medicine* to lead in this discussion.

The Centralblatt für Laryngologie und verwandte Wissenschaften.—We are informed that Dr. Emil Mayer, of New York city, has been appointed the co-editor for America of this journal. The editor in chief is Sir Felix Semon, of London.

The Buffalo Academy of Medicine.—At the last regular meeting of the Section in Obstetrics, on Tuesday evening, the 23d inst., the following papers were presented: Painful Menstruation, by Dr. C. E. Congdon; and Physicians, Surgeons, and Fees, by Dr. S. Y. Howell.

The St. Louis Medical Society.—At the last meeting, on Saturday evening, the 20th inst., Professor R. L. Gerner, of Chicago, read a paper entitled *Remarks*

on the Simian Voice and Speech; and Dr. M. Dwight Jennings and Dr. R. C. Blackner presented a stereoscopic demonstration of the structural changes of the kidneys in Bright's disease.

Marine-Hospital Service Health Reports.—The following cases of small-pox, cholera, and plague were reported to the supervising surgeon-general during the week ending May 20, 1899:

Small-pox—United States.

Mobile, Ala.	May 12.	2 cases.
Washington, D. C.	May 12-15.	3 "
Savannah, Ga.	May 9-16.	5 "
Chicago, Ill.	May 9.	2 "
Evansville, Ind.	May 6-13.	2 "
Emporia, Kan.	May 6-13.	2 "
Kansas City, Kan.	Apr. 29-May 6.	32 " 1 death.
Louisville, Ky.	May 4-11.	16 " 8 deaths.
New Orleans, La.	May 6-13.	9 "
Shreveport, La.	May 8-13.	4 "
Steeleton, near Baltimore, Md.	May 17.	4 "
St. Paul, Minn.	Apr. 29-May 6.	1 case.
St. Louis, Mo.	Jan. 21-May 12.	65 cases.
Las Cruces, New Mexico.	May 12.	19 "
Borough of Brooklyn, N. Y.	Apr. 29-May 6.	1 case.
Cleveland, Ohio.	May 6-13.	11 cases.
Allegheny, Pa.	May 6-13.	2 "
Johnstown, Pa.	May 6-13.	2 "
Philadelphia, Pa.	May 6-13.	1 case.
Providence, R. I.	May 10.	1 "
Barnwell County, S. C.	May 10.	3 cases.
Beaufort (not verified), S. C.	May 10.	3 "
Clarendon County, S. C.	May 6.	3 "
Edgefield County, S. C.	May 6.	5 "
Galveston, Texas.	Apr. 29-May 6.	7 "
Laredo, Texas.	Apr. 29-May 6.	2 "
Newport News, Va.	May 9-13.	5 "
Newport News, Va.	May 13-17.	6 "
Norfolk, Va.	May 11-18.	16 "
Portsmouth, Va.	May 11-18.	9 "
Milwaukee, Wis.	May 6-13.	2 "

Small-pox—Foreign.

Brussels, Belgium	Apr. 15-22.	1 death.
Cairo, Egypt.	Mar. 26-Apr. 22.	4 deaths.
London, England	Apr. 15-22.	3 cases.
Athens, Greece.	Apr. 22-29.	21 " 8 "
Bombay, India.	Apr. 4-18.	15 " 8 "
Calcutta, India.	Mar. 25-Apr. 8.	3 "
Bluefields, Nicaragua.	Apr. 22-29.	1 case.
Moscow, Russia.	Apr. 8-15.	8 cases.
Odessa, Russia.	Apr. 22-29.	5 " 1 death.
St. Petersburg, Russia.	Apr. 15-22.	18 " 3 deaths.
Constantinople, Turkey.	Apr. 17-24.	2 "
Constantinople, Turkey.	Apr. 24-May 1.	3 "

Cholera.

Bombay, India.	Apr. 4-18.	6 deaths.
Calcutta, India.	Mar. 25-Apr. 8.	43 "

Plague.

Bombay, India.	Apr. 4-18.	1,199 deaths.
Calcutta, India.	Mar. 25-Apr. 8.	266 "
Madras, India.	Mar. 25-31.	1 death.
Tamsui, Formosa, Japan.	Mar. 8-29.	394 deaths.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Tuesday evening, the 23d inst., a discussion on the diagnosis and treatment of mastoiditis was opened by Dr. J. P. Davidson.

The Chicago Society of Internal Medicine.—At the annual meeting, on Thursday evening, the 25th inst., a general discussion was opened on the prophylaxis and management of apoplexy.

Changes of Address.—Dr. E. Mather, from Jersey City to No. 22 Adams Avenue, W., Detroit; Dr. Otto H. Schultz, to No. 1109 Madison Avenue, New York.

The New German Hospital in Brooklyn was dedicated with appropriate ceremonies on Sunday, May 21st.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 13 to May 20, 1899:*

BARNHARDT, HENRY A., Acting Assistant Surgeon, will proceed to Camp Meade for duty.

CLEARY, PETER J. A., Lieutenant-Colonel and Deputy Surgeon-General, is detailed as a member of the army retiring board appointed to meet at Fort Sam Houston, Texas.

DEAN, ELMER A., First Lieutenant and Assistant Surgeon, is relieved at Fort Snelling, and will proceed to St. Paul as attending surgeon and examiner of recruits.

DE LOFFRE, AUGUSTUS A., Major and Surgeon, is directed to report to the army retiring board at Fort Sam Houston for duty.

DUNSHIE, JAMES F., Acting Assistant Surgeon, is relieved at Camp Meade and will proceed to Havana for assignment to duty.

DUTCHER, BASIL H., First Lieutenant and Assistant Surgeon, is detailed as a member of a board of officers appointed to meet at Fort Leavenworth for the examination of persons for appointment as second lieutenants.

GRANDY, LUTHER B., Acting Assistant Surgeon, will proceed to San Francisco for transportation by first transport to the Philippine Islands for assignment to duty.

GLENNAN, JAMES D., Captain and Assistant Surgeon, is relieved from the Department of Matanzas and Santa Clara and will rejoin his proper station, Fort Myer, Virginia.

HEIZMANN, CHARLES L., Major and Surgeon, is detailed as a member of the army retiring board appointed to meet at Fort Sam Houston, Texas.

KENNEDY, JAMES M., Captain and Assistant Surgeon, is relieved from muster out of troops at Augusta, Georgia, and will proceed to the Presidio of San Francisco and report to the commanding officer, Fourth Cavalry, for duty.

KILBOURNE, HENRY S., Major and Surgeon, is detailed as a member of a board of officers appointed to meet at the Army Building, New York, for the examination of officers for promotion.

M'Caw, WALTER D., Captain and Assistant Surgeon, in addition to duties as surgeon at Fort Porter, New York, is assigned as examiner of recruits in Buffalo.

MORRIS, JOHN E., Acting Assistant Surgeon, will proceed from New York to Indianapolis.

NETTELROTH, ALEXANDER, Acting Assistant Surgeon, will proceed to Louisville.

NORMAN, SEATON, Acting Assistant Surgeon, will proceed to Havana for assignment to duty.

PREYTON, CHARLES E., Acting Assistant Surgeon, is relieved at Camp Mackenzie, Augusta, Georgia, and will proceed to Richmond, Virginia.

PREVANCE, WILLIAM E., Captain and Assistant Surgeon, is relieved at Fort McPherson, Georgia, and will proceed to Washington and report in person to RAY, P. HENRY, Major, Eighth Infantry, to accompany him to Alaska as chief surgeon, District of Northern Alaska.

REAGLES, JAMES, Acting Assistant Surgeon, is relieved at Plattsburg Barracks, New York, and will proceed to Vancouver Barracks, Washington, for assignment to duty.

STEPHENSON, WILLIAM, Captain and Assistant Surgeon, is detailed as a member of a board of officers appointed to meet at the Army Building, New York, for the examination of officers for promotion.

STONE, OWEN W., Acting Assistant Surgeon, is relieved from the Department of Santiago and will proceed to Havana for assignment to duty.

STREET, BAEN, Acting Assistant Surgeon, is relieved at Camp Columbia, Havana, and will proceed to Washington and report to the surgeon-general.

TORNEY, GEORGE H., Major and Surgeon, is detailed as a member of a board of officers appointed to meet at Fort Leavenworth for the examination of persons for appointment as second lieutenants.

WILSON, ROY A., Acting Assistant Surgeon, will proceed to Camp Meade for duty.

ZAUNDER, ROBERT H., Acting Assistant Surgeon, will proceed to Camp Meade for duty.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending May 11, 1899:*

MURRAY, R. D., Surgeon. Granted leave of absence for fifteen days from June 4, 1899.

PECKHAM, C. T., Surgeon. When relieved from duty at New Orleans, Louisiana, by Passed Assistant Surgeon J. A. NYDEGGER, to rejoin station at Pittsburgh, Pennsylvania. To proceed to Neville Island, Pennsylvania, for special temporary duty.

VAUGHAN, G. T., Passed Assistant Surgeon. Detailed by the Secretary of the Treasury as delegate to represent the Treasury Department at the meeting of the International Tuberculosis Congress at Berlin, Germany, May 24th to 27th, inclusive.

NYDEGGER, J. A., Passed Assistant Surgeon. To rejoin station at New Orleans, Louisiana.

STEWART, W. J. S., Passed Assistant Surgeon. To proceed to Nantucket, Massachusetts, for special temporary duty. May 10, 1899.

MCMULLEN, JOHN, Assistant Surgeon. Upon being relieved from duty as Sanitary Inspector on United States transport *Buford*, to report to the medical officer of the service at the United States Immigration Depot, New York, for temporary duty.

VON ECKHART, R. H., Assistant Surgeon. Detailed as Inspector of Quarantines.

HEISEL, V. G., Assistant Surgeon. Detailed by direction of the President for duty in the office of the United States Consul at Naples, Italy. Upon being relieved from duty at the Immigration Depot, New York, to report at Washington, D. C., for instructions preliminary to departure for Naples, for duty.

HONDY, W. C., Assistant Surgeon. Relieved from duty at the Reedy Island Quarantine Station and directed to proceed to Stapleton, Staten Island, New York, and report to medical officer in command for duty and assignment to quarters.

CORBIT, G. M., Assistant Surgeon. Granted leave of absence for seven days.

Board Convened.

Board convened to meet at Detroit, Michigan, on May 20, 1899, for the physical examination of Surgeon

JOHN GODFREY, M. H. S. Detail for the board: Surgeon H. W. SAWTELLE, chairman; Passed Assistant Surgeon G. M. MAGRUDER, recorder.

Society Meetings for the Coming Week:

TUESDAY, May 30th: American Dermatological Association (first day—Philadelphia); Rome, New York, Medical Society.

WEDNESDAY, May 31st: American Orthopaedic Association (first day—New York); American Surgical Association (first day—Chicago); International Association of Railway Surgeons (first day—Richmond); American Dermatological Association (second day); Auburn, New York, City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield).

THURSDAY, June 1st: Indiana State Medical Society (first day—Indianapolis); Michigan State Medical Society (first day—Kalamazoo); American Orthopaedic Association (second day); American Surgical Association (second day); International Association of Railway Surgeons (second day); American Dermatological Association (third day); New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, New York; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, of St. Louis.

FRIDAY, June 2d: Indiana State Medical Society (second day); Michigan State Medical Society (second day); American Orthopaedic Association (third day); American Surgical Association (third day); International Association of Railway Surgeons (third day); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, June 3d: American Academy of Medicine (first day—Columbus, Ohio); Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Births, Marriages, and Deaths.

Married.

KELLERS—BRODIE.—In Charleston, South Carolina, on Thursday, April 27th, Dr. Henry C. Kellers and Miss Edyth M. Brodie.

O'NEIL—MEYERS.—In Richmond, Virginia, on Wednesday, May 17th, Dr. Richard E. O'Neil, of Boston, and Miss Adela Pegram Meyers.

WHEATON—WILT.—In Chicago, on Wednesday, May 17th, Dr. Clarence Lloyd Wheaton and Miss Caroline Georgiana Wilt.

Died.

CANDIDUS.—In Brooklyn, on Tuesday, May 16th, Bertha Candidus, wife of Dr. P. C. Candidus.

FILSON.—In Burlington, N. H., on Saturday, May 20th, Dr. J. B. Filson.

GALBREATH.—In Pottsville, Pennsylvania, on Tuesday, May 20th, Dr. Thomas Galbreath.

MCENROE.—In New York, on Wednesday, May 17th, Dr. William Hale McEnroe, aged forty-four years.

NIVISON.—In Roseville, New Jersey, on Friday, May 19th, Dr. Mark Nivison, of New York, in the sixty-first year of his age.

STICKLER.—In New York, on Thursday, May 18th, Dr. Joseph William Stickler, of Orange, New Jersey, aged forty-five years.

Letters to the Editor.

POISONOUS DOSES OF GELSEMIUM IN THE TREATMENT OF INFLUENZA.

OXFORD JUNCTION, IOWA, May 11, 1899.

To the Editor of the *New York Medical Journal*:

SIR: I see a mention in the *Journal* for May 6th of gelsemium in grippé. I know nothing of Dr. Barry's original article, but, as the editor seemed a little skeptical, I should like a few words with you. During the winters of 1889-'90 I used tincture of gelsemium in grippé with what I thought unusual success. But I dreamed not of the virtues of the drug I was using. About February 15, 1891, J. M. came to my stable just as I was leaving for a three or four hours' drive. He had been taken during the night with an unusually severe attack of grippé, all symptoms being exaggerated. Being in a hurry to start, I told him to go to my house and tell my wife to give him two teaspoonfuls of tincture of gelsemium, and I told him to take it in half-spoonful doses every three hours. Knowing his tendency to double all doses, I carefully cautioned him not to do so in this case, for I was then giving him a full dose. Mrs. B. again cautioned him and told him he was getting a very large dose as it was directed. I returned home a little after noon and went in to see the patient. I found him lying across the bed in a deep sleep, breathing deeply and heavily. His pulse was weak but regular. I asked about his medicine, and found that he had taken half a spoonful at 8 A. M., a spoonful at 8.30 A. M., and the last half spoonful at 9 A. M. I told his wife that he would probably lie there all the afternoon and advised her to let him rest.

At 9 P. M. I called again, and he had not changed his position. We pulled him around on the bed, took off his shoes, and covered him up, and I left him for the night. The next morning he was up and at my house early with not a symptom of the grippé remaining, cured, absolutely cured, of a severe attack of grippé in twenty-four hours. He then described his feelings after taking the last dose, and told how badly he wanted me with him, and said: "Why, doctor, I could not move nor speak. I thought I was a goner."

In a few days our hotel landlady was taken in the same way as Mr. J. M. had been. She was taken about noon, and I saw her about 9 P. M. She knew of the above-mentioned case and said: "Now, doc, get me out of this quick, for I have no time to be sick." I asked her if she wanted a J. M. dose, and she said: "I will take anything, just so you don't kill me." I explained all the effect and symptoms of an overdose of the medicine and prescribed thirty drops of tincture of gelsemium every hour till she was well under the influence

of the same. She took three or four doses, and the next day she was well.

The third patient was a young man who had ridden several miles to attend the funeral of his grandmother. He was taken during the night, and I was called the next morning. He expressed his desire to be "out of this" soon, for his business called him home. I told him of the above-mentioned cases and asked him if he would take the medicine in poisonous doses. He replied that he would. So I explained the effect, prescribed as in the second case, and left him. The next day he was in town, three miles from his grandparent's, and said: "I am as well as I ever was."

From these three cases I concluded that gelsemium was a specific for *la grippé*, and after six years' experience with it I am more certain than before. After this treatment there are no sequelæ, and, if it is begun in time, no complications. To relieve the pain, aches, etc., I usually prescribe some anodyne tablets, and know of none better than antikamnia. L. K. BOBO, M. D.

* * Our correspondent has certainly been fortunate in his use of poisonous doses of gelsemium. It is a drug that we are taught to use with great caution even in ordinary doses, and it should be borne in mind that death has resulted from taking thirty-five drops of a tincture of the bark (the rhizome and rootlets are the official parts of the plant), also that somnolence and inability to move or speak are not the only symptoms of gelsemium poisoning. Possibly Dr. Bobo used a tincture that was of less than the official strength. We feel it our duty to caution the reader against the use of overdoses of poisonous drugs, no matter how much good they may have accomplished in the hands of others.

THE PERIOD OF INCUBATION OF MEASLES.

359 MASSACHUSETTS AVENUE, BOSTON, May 23, 1899.

To the Editor of the *New York Medical Journal*:

SIR: A word more concerning the period of incubation of measles is rendered necessary by the probably hasty reading of my first letter by Dr. George M. McCombs. He thinks the infection was spread by the "little sister" for whose books the boy came. My words are "his books." The little sister was too young to be in school. Some more explanation concerning the boy may make clear the reason of his carrying so much of the contagion about with him while a physician does not do so. The boy was one of those degenerates known in the South as "poo' white trash." Some few of this class of being are found in the lowest classes of the public schools all over the country. The whole family lived in a two-room cabin on the outskirts of the town. The boy was dirty and unkempt, which he excused by saying that he had not come to stay in school that day. He had on an old topcoat into which he had been pinned before he left his home. He had been absent a week from school, and had very likely lived day and night in the suit he had on during that time, judging from the odor which exhaled when he removed his topcoat, which I purposely required him to do before he took his seat. This topcoat retained in the fibres of his house clothing all the contagion with which he had left home, none, or at least very little, being lost by the way. Had this boy been the inmate of a cleanly home, where he would have received a bath and been dressed in a fresh suit before leaving for the school-room, I should not have considered the experiment worthy of a trial.

SARA NEWCOMB MERRICK, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XX.

RECOVERY OF COMPENSATION.

(Continued from page 718.)

Repeal of Disqualifying Act, Effect on Services Previously Rendered.—But what effect, if any, does the repeal of a disqualifying act have upon the physician's right to recover for services which were unlawfully rendered before such repeal? Here again we find some conflict of authority, the supreme court of Massachusetts being of the opinion that the disqualifying act was not designed to prevent the debt from accruing, but was intended to deprive the physician unlawfully practising from the means of enforcing the payment of such debt, and therefore when the disqualifying act was repealed the obligation stood complete, and the means of enforcing it by legal proceedings were immediately available.*

The courts of all of the other States which have passed upon the question have, however, repudiated this doctrine, they holding, with better reason, it seems, that such contracts are void in their inception, and that the repeal of the disqualifying act can therefore raise no obligation on the part of the patient and create no right to recover on behalf of the physician.† It has been heretofore observed that the repeal of an act making it a penal or criminal offense to practise medicine without legal qualifications takes from the court the power of enforcing the penalties incurred under such repealed law; the distinction made between the criminal and civil rights in such a case may be regarded as another evidence of the policy of our law to throw about the accused every reasonable protection of law.

Steps for Consideration in Enforcing a Claim.—If, on the other hand, the physician has perfected his legal status, as nearly all practising physicians and surgeons have done, it then becomes pertinent to consider the various steps in the process of enforcing payment by legal measures.

Action will lie in this Country for Physicians' Fees.—It has been observed that in England, until the medical acts passed during the present reign, the physician was not entitled as a matter of legal right to recover compensation for his services, the law considering them of so exalted and honorable a character that it would not encourage the suspicion that they had been rendered from so unworthy a motive as that of a mercenary. Moreover, Lord Kenyon, in a case in which he refused to enforce the payment of a fee, expressed his doubt whether the physicians would not disclaim a right which would place them in society on a footing with common men.‡ However justified the opinion of Lord Kenyon may have been at the time and place of its expression, it was not approved by the wisdom of the succeeding century in his own country, nor has it ever been considered suitable to the conditions of this

country. Justice Stevens, of the supreme court of Indiana, in considering the application of the English doctrine by our courts, said with perspicuity and unanswerable logic: "It is true that we have adopted the common law of England, but it is a qualified adoption. We have only adopted so much of it as is of a general nature and not local to that kingdom, and not inconsistent with our own laws. We have not adopted any part of it that is peculiar to that country, or that is contrary to, or inconsistent with, the spirit and practice of our own institutions. It is at least doubtful whether the principle here contended for was any part of the common law at the time the States of this Union dissolved their allegiance to that kingdom; but if it were, it is clearly a principle which is local to that country, and is inconsistent with the spirit and genius of all our institutions and the practice of our courts. Our institutions and laws are all based on the great and broad principles of liberty and equality, and know nothing about nobles and ignobles, honorables and common men. There is but one class known: all stand upon the same footing, and bow with equal submission to our common master—that is, the law of the land. We have no privileged orders known to the law, either as to suing or being sued."*

The physician entering court upon the common plane of all litigants must come prepared with proper and sufficient evidence to show those facts upon which he bases his right to recover.

Limitations of Actions.—Perhaps the first question to consider at this stage is the age of the claim: is the account barred by the statute of limitations? If so, would the patient be willing to plead such a defense to defeat recovery?

The statutory period of limitation upon the different classes of debts and obligations varies so greatly in the several States that no general statement of the law can be made; but recourse must be had in each case to the statutes of the particular State to determine whether or not the claim is within the period of limitation.

If the account consists of a single item, it is a simple matter to determine whether it is within or beyond the prescribed period; but perhaps the account consists of a series of items extending over a period of several years, the earlier of which items are beyond the limit. Is the right to recover such items barred? Nearly every State recognizes the doctrine of mutual accounts, which is founded upon the presumption of a mutual understanding that the parties to the account will continue each to credit the other until either desires to terminate the dealing, when the balance will be ascertained and will be considered as accruing at the date of the last item of the account. Neither Louisiana † nor Texas, however, accept this doctrine, but in case of a continuous account consider the statute of limitations as running against each item from the date of its entry. New Hampshire also denies the rule, excepting as between merchant and merchant.‡

Whether the ordinary account of a physician—that is, an account consisting of charges for professional services on the one hand, and of credit for the payment of fees by the particular patient on the other hand—will constitute a mutual account is a question upon which the courts of the different States are divided

* Hewitt vs. Wilcox, 1 Met. 124.

† Pickett vs. Alexander, N. C., 3 E. R. A., 44, 8 S. F. Rep. 467.

Bailey vs. Mogg, 1 Denis, 60 (N. Y.); Nicholson vs. Boulton, 1 Omo, 305; Warren vs. Saxby, 12 Vt. 146; Quarles vs. Evans, 7 Tex. Ann. 544.

‡ Chorley vs. Bolcut, 1 T. R., 317.

* Judah vs. McNamara, 10 Ark. 461 (1846).

† Arismeneux vs. Lefebvre, 6 Robt. 450.

‡ Blair vs. Price, 6 N. H., 15.

The doctrine more commonly accepted is that an account to be mutual must be the result of a mutual exchange of commodities or services, the mere payment of money on one side not being considered sufficient to make the account mutual so as to prevent the bar of recovery. This is the law in California, Georgia, Indiana, Maine, Maryland, New York, and Pennsylvania.

On the other hand, the supreme court of Michigan holds that a payment made upon an account will render the whole account open and mutual, so as to take the earlier charges out of the operation of the statute of limitations.*

This question seems, unfortunately, to be one upon which there is considerable conflict and uncertainty, the court of the same State even contradicting itself in the course of a few years; † therefore the only safe method one can adopt in carrying long accounts of the sort is to have an occasional settlement or accounting in which the balance is either liquidated by cash or note, or is carried forward as a new account, or for the new period of time; in such a case the statute of limitations will run anew from the date of such settlement or accounting. ‡ If the settlement is effected by carrying the balance forward, it is essential that the debtor should have the account before him, and should agree either expressly or impliedly to the correctness of the new balance.

In case the account is found to be barred, it then becomes necessary to determine whether the patient would avail himself of a defense of this character, for suit may be commenced upon a claim against which the statutory period has run, either in whole or in part, and unless the defendant specially pleads the statute as a defense, judgment may nevertheless be entered in the plaintiff's favor for the full amount of the claim.

Particularity of Items of Account.—As to the particularity with which the account must set forth the items of the bill upon which suit is begun, it may be stated generally that this depends upon the nature of the account. If the account is one upon which there has been no settlement or liquidation of the character referred to in the preceding paragraph, each item should be charged separately and under the date upon which the particular service was rendered, with a specific sum charged for each visit or item entered upon the account. There are cases holding that such particularity is not necessary, § but there is not sufficient authority to justify one in ever keeping or preparing an account with less particularity.

In an early South Carolina case the bill sued upon contained an item of "thirteen dollars for medicine and attendance on one of the general's daughters, in curing the whooping-cough." A new trial was asked for on the ground that the physician ought to have given a specific bill of the medicine and attendance. The court, through Justice Smith, said: "I did think otherwise on hearing this case; but on mature consideration I think the charges were too general, and am, therefore, for granting a new trial." ¶ The question of whether or not the account is sufficiently specific must be decided by the court according to the prevailing usage in similar cases. §

* *Hollywood vs. Reed*, 55 Mich., 308.

† See *Madden vs. Blair*, 66 Ga., 49; and *Lark vs. Cheatum*, 80 Ga., 1.

‡ *Schall vs. Eisner*, 58 Ga., 190.

§ *Van Bibber vs. Merritt's Exr.*, 12 Weekly, N. C., 272.

¶ *Hughes vs. Hampton*, 2 Tread. Const. (S. C.), 745.

§ *Schmidt vs. Quin*, 1 Mill Const., 418 (S. C.).

Regarding the character of the visits or services performed, and the kind and amount of the medicines charged, it does not seem necessary that the bill should be descriptive. In an early New Hampshire case in which the items were specified as "to visit" and "to medicine," the court said: "Had this been shown to be different from the usage of medical men, it might be proper to inquire into the character of the disease and the circumstances under which the services were performed; but the charge stands well enough until something is shown to the contrary. There is nothing upon the face of the charges to create any suspicion of their correctness; and we can not, without evidence, make any presumption against them. Or, if there had been a general charge for visits and medicines throughout the year, and a gross sum affixed thereto, for compensation to the physician and for medicines furnished, there might be some reason for inquiring into it. But here is a specific sum charged for each visit; and it was competent for the defendant to show that the services were not rendered and that the charges were unreasonable, if such had been the facts." *

From the preceding quotation the reader will realize the necessity in case of an unusual charge of specifying the character of the services rendered. If, for instance, a minor operation were performed, or if unusual services of any character were rendered while making a visit, and yet the item appeared upon the bill as a "visit," with the proper amount charged for the real services performed, the difference between the sum charged and the amount ordinarily charged for a mere visit would be so great as to create a suspicion as to the correctness of the bill.

Is Proof of License Necessary?—Perhaps the first question to decide upon commencing suit is whether it is incumbent upon the physician, or plaintiff, to prove that he has fully complied with the law of his State and was duly qualified to practise medicine at the time the services in question were rendered; or whether this will be presumed until contradicted or disproved by the defendant. Upon this question there is again a difference of opinion in the courts of the different States.

Probably the rule best founded on reason and justice is that in civil suits between physician and patient the physician's right to practise medicine will be presumed until disproved, or at least disputed; while in cases of a criminal prosecution against one for practising medicine unlawfully, he must prove himself to have complied with the law. This rule is very clearly laid down by Justice McAllester, of the Illinois appellate court, who says: "After a thorough examination of the authorities, and a full consideration, we are of the opinion that the rule with its proper distinctions may be thus stated: Where the question of license or qualification of a physician arises collaterally in a civil action between party and party, or between the doctor and the one who employed him, then the license or due qualification under the statute to practise will be presumed; but in case of a prosecution on behalf of the public the rule is otherwise, and in such cases license or due qualification under the statute is not presumed, and it rests with the defendant to prove it." †

A sound reason for this rule is that when an act is required by positive law to be done, the omission of which would be a misdemeanor, the law presumes that

* *Bessett vs. Spafford*, 11 N. H., 167.

† *Williams vs. People*, 20 Ill. App., 93.

it has been done, and therefore the party relying on the omission must make some proof of it.*

There is considerable doubt cast upon the full application of this rule in Illinois by a more recent opinion of the supreme court of that State. The court, after referring to the decision sustaining the above rule, expresses a desire not to commit itself in the case they were then considering, which was one between third parties in which the physician's qualifications arose only collaterally, but they said: "If he (the physician) were himself suing to recover for his professional services, he would doubtless be required to show affirmatively his compliance with the law, but between third parties the fact that he is and has for a long time been practising as a physician and surgeon is sufficient to show, *prima facie*, that he is lawfully authorized so to do."†

At an early date the supreme court of New York decided squarely upon the point, holding that in a suit by the physician for his fees a license would be presumed until the contrary was shown.‡

The supreme court of Louisiana, also at an early date, held that where one acknowledged a physician as such by employing him to render professional services such acknowledgment was *prima facie* evidence that he was duly qualified,§ but that when the defendant in the suit propounded interrogatories to the physician regarding his license, and he failed to answer them, such failure would be taken as confessing that he had no license to practise.||

On the other hand, the rule that a physician must, upon suing, prove that he has secured a license in conformity with the law, was acknowledged as the law in Delaware in 1849.¶

The supreme court of Georgia declared such rule to be the law in that State as early as 1850. In 1855 the supreme court of Alabama said: "The effect of these statutes, taken together, was to prohibit all persons from practising as physicians, unless they were licensed by a medical board in their State, or their names were enrolled according to the provisions of the statute, or unless they practised on the botanic system alone; and the necessary result of this prohibition would be to prevent a recovery in all actions founded on contracts for medical services, unless it was proved that the persons rendering such services were not within the prohibition."‡

The same rule is held to be the law in New Jersey: and Massachusetts.‡ The supreme court of Indiana, in a recent decision, after reviewing all of the principal cases on both sides of the question, expresses itself as believing that good reason exists in civil suits for the rule of presuming the physician qualified until the qualification is disputed or disproved, but the court adds: "The statutes under which these several rulings have been made, while similar to our own, none of them, so far as we know, provide, as does ours, that no cause of action shall lie in favor of any person for ser-

ices as physician who has not, prior to the rendition of such services, procured a license to practise." The court then argues that this clause in the statute has the effect of compelling the physician to prove that he has complied with the requirements of the law before recovering in a suit brought to collect the value of professional services.*

The statutes of some States contain the reasonable provision that no evidence of authority to practise medicine will be required as a prerequisite to a recovery for professional services unless notice is given by the defendant that he shall require proof upon that point. The court of appeals of South Carolina held in an early case that the physician's right to practise would be presumed unless the defendant gave him reasonable notice that proof upon that point would be required.‡

Regarding those States in which the question has not been decided, it is pertinent to say that no better advice can be given than: Assume that no presumption of law will be indulged in favor of the physician's right to practise, and have your case prepared accordingly.

In case of suit brought in one State for services rendered in another, no proof is necessary of the right of the physician to practise in the State in which the services were rendered, for the courts of the State in which suit is brought will not presume that the practice of medicine was restricted in that State.‡

Proof of Authority to Practise.—The character of proof required to show that one is qualified to practise medicine and surgery depends almost entirely upon the statutes of the particular State, and the preparation of this proof can be entrusted only to those skilled in the law; therefore it will be idle to give more than a very cursory review of the law upon this point. Probably the fundamental rule of evidence in making this proof is the simple one that *the best evidence of which the case, in its nature, is susceptible will be required.* This rule means that if a right is to be proved which has its origin or foundation in a diploma or license, then the right can be proved only by producing and proving the original diploma or license. Should, for instance, one living in a State requiring as a qualification to practise medicine that he shall have graduated from a regularly incorporated medical college, desire to prove that he has complied with this law, he must not only produce his original diploma, but he must show the incorporation of the college. And if the college does not owe its corporate existence to a special act of the legislature of that particular State, he must produce the act of incorporation; he must also show the existence of the college at the time the diploma purports to have been issued.*

Should the law not, however, provide that the degree shall have been issued by an incorporated body, then a production of the corporate records is not necessary.†

The courts at an early date required strict proof of all of these facts, never admitting a diploma as proof *per se* of its genuineness, but requiring that the genuineness of the parchment should be proved *abundant*.‡ The rigor of the law has, however, been somewhat ameliorated by statutes which frequently provide that when the physician has presented his diploma to the State

* City of Chicago vs. Wood, 24 Ill. App., 40.

† North Chicago Street Ry. Co. vs. Cotton, 140 Ill., 186.

‡ McPherson vs. Chesdell, 24 Wend., 15; Thompson vs. Saxe, 1 Denio, 175.

§ Prevost vs. Nichols, 11 Martin, 21.

‡ Dickerson vs. Gurdy, 5 Robinson, 189.

‡ Adams vs. Stewart, 5 Harr., 114.

‡ Haver vs. Smith, 8 Ga., 74.

‡ Mays, Adams, etc., vs. Williams, 27 Ala., 267.

‡ Dow vs. Haley, 30 N. J. S., 354.

‡ Spaulding vs. Alford, 1 Pick., 23.

* Cooper vs. Griffin, 13 Ind. App., 212, 10 N. E. Rep., 710.

† Crane vs. McLaw, 12 Richardson, 129.

‡ Downs vs. Minchew, 30 Ala., 86.

* People vs. Nace, 24 Hun., 298; Hunter vs. Blount, 27 Ga., 76.

‡ Holmes vs. Hale, 74 Me., 28.

‡ Hill vs. Bodine, 6 Ala. (O. S.), 56.

board of health or State board of medical examiners, and verified its genuineness, the board shall issue a certificate to that effect, and that such certificate and diploma shall be proof of the holder's right to practise medicine. In case of provisions of this sort the certificate serves to prove and identify the diploma. The statutes sometimes make the license issued by the designated board competent evidence without proof of the signature. Under such a statute it is incumbent upon the physician to simply offer the license in evidence as full proof of his rights.*

(To be continued.)

Pith of Current Literature.

Delusions and Insanity.—The *Occidental Medical Times* for January quotes the following from the *St. Louis Medical and Surgical Journal* of unspecified date: The supreme court of Tennessee has rendered an important decision in a case of murder in which a plea of insanity was set up. The court held that "in criminal cases the correct issue is not that of sanity, but of responsibility. The delusions of a sane man do not make him irresponsible. The question is in such cases, Is the delusion set up as a defense the delusion of an insane person? Many men of strong minds," continued the court, "have delusions. Remarkable instances are given in the works on medical jurisprudence of delusions in men of prominence in all the walks of life. Lord Kenyon had an unreasoning fear of poverty, and so had Lord Stowell, although he was a man of immense fortune, his home being absolutely destitute of the necessities and comforts of life. Lord Erskine would never sit at a table or remain in a company as one of thirteen persons. Lord Eldon, after he had made up his mind and expressed his opinion lucidly and conclusively, was at all times a prey to grave doubts of his correctness. Lord Brougham, upon more than one occasion, was placed in seclusion, his mind being clearly off balance. Judge Breckenridge, of Pennsylvania, is reported to have on a hot day, while holding court at Sunbury, gradually taken off his clothes until he sat naked on the bench. Judge Baldwin, of the United States supreme court, was a hypochondriac. A distinguished New England judge imagined that a dropsical affection, under which he labored, was a sort of pregnancy. And yet none of these men were insane, because they had reason and sanity enough to conquer and overcome these delusions. A familiar illustration is that of the Mormon elders, who claimed that they had a direct revelation from heaven permitting them to practise and teach polygamy. The world generally regards this as a rank heresy, and the claim to be the evidence of an unreasonable delusion. It has, however, been held that they can not defend on the ground of such delusion, inasmuch as otherwise they are sane, shrewd, active, successful, and unusually practical men in their business and social relations, and they have been held responsible for such delusions."

Acute Rhinitis and General Infection.—At the Liverpool Medical Institution Dr. Pernewan (*British Medical Journal*, May 13th) related a case of acute rhinitis

which had caused general infection of the system, and in which treatment of the nasal condition caused rapid subsidence of the fever. Dr. Carter said that in all cases of apparently inexplicable fever the nasal cavities should be carefully examined. He illustrated this general statement by brief reports of several cases, in one of which recurring attacks of what was believed by the patient to be malarial fever were prevented by thorough antisepticism of the nostrils, though the attacks had been going on for years. In another case a married woman, aged twenty-three years, admitted to hospital on March 12, 1896, with a temperature of 104.2° F., and a history of illness of some months' duration, the fever at once began to decline after the use of nasal antiseptics and in a few days completely subsided, and although she was detained in hospital for three weeks no recurrence took place. He had published reports of eight or ten cases of most serious and prolonged general illness of a very mysterious character that had come under his notice during the last twelve years, all of which were completely cured by thorough antiseptic treatment of the internal nares. Two of the patients were judged to be *in extremis* when the treatment was commenced, and a third had been continuously ill for eighteen months.

Some Points in Appendicular Inflammation.—Mr. H. Betham Edwards (*Lancet*, May 6th) deduces from a paper on Some Complicated Cases of Appendicitis the following points: 1. In a small proportion of cases of appendicitis with abscess there is intraperitoneal extension to the liver region. 2. In relation with the liver pus may be only below it or also above it, "subdiaphragmatic." 3. Clinically there is considerable difficulty in determining, when the apparent upper border of the liver is raised, how much of this is due to simple displacement upward by a fluid collection, or to a subdiaphragmatic abscess, or to an associated lesion at the lung bases.

Osler on Chronic Splenic Enlargement with Recurring Gastro-intestinal Hemorrhages.—Dr. William Osler (*Edinburgh Medical Journal*, May) says that, excluding the enlarged spleen of leucæmia, chronic malaria, cirrhosis of the liver, heart disease, and rickets, the cases of so-called primitive enlargement of the organ fall into two groups.

First, a series in which the spleen is enlarged without causing any symptoms other than those due to mechanical pressure. In the past few years the author has seen four patients, all women, apparently in perfect health, who complained only of a feeling of pressure in the abdomen, in all of whom the spleen was much enlarged. In two cases in which the organ was freely movable and caused a great deal of discomfort, his colleague Halsted opened the abdomen and successfully packed the spleen in position with gauze, an operation much less serious than splenectomy and very efficacious. Both these patients have been seen more than two years subsequent to the operation, and have remained quite well. In a third case a girl was sent into the gynecological department, supposed to have an ovarian tumor. She was robust and strong, with good color, and had been hard at work. She subsequently had a twist of the ligaments and splenicus of the spleen, with enormous enlargement, adhesion to the abdominal wall, redness, and inflammation. The organ was freely incised by Halsted, and an enormous quantity of necrotic spleen tissue removed; the patient made a good recovery. This condition is, Dr. Osler thinks, more common than is

* White vs. Martin, 38 Ala., 447.

suspected. The spleen is, as a rule, only moderately enlarged. In some cases there has been a history of past malaria, but in a majority the condition is one of, so far as can be seen, primary enlargement. It must not be forgotten, he says, that only a blood examination can determine whether or not such patients have leucæmia, since in this disease, as is well known, an individual may look well, and have indeed nearly a normal number of red blood-corpuscles.

Secondly, cases of enlargement of the spleen with anæmia, Griesinger's anæmia splenica, the splenic pseudo-leucæmia of H. C. Wood, or, as it is sometimes termed, the splenic variety of Hodgkin's disease. Dr. Osler prefers the name splenic anæmia, introduced by Griesinger. The term, he says, should be restricted to the class of cases in which a progressive anæmia develops in connection with a primitive splenomegaly. The relation of the enlarged spleen to the anæmia is still in doubt, whether the perverted state of the blood is due to splenic inadequacy (which does not seem at all probable, since removal of the spleen has cured some cases), or whether both the enlarged spleen and the anæmia are due to some chronic toxæmia. In the author's experience the cases have not been uncommon. He has seen four cases during the present year, one with Dr. Graham, of Toronto, two reported in his paper, and a fourth, which is at present under observation.

Among peculiarities which have been illustrated by his cases, he mentions the following: The remarkably chronic course, extending from three to twelve years; the chlorotic features of the blood, the hæmoglobin value often not more than fifty per cent.; the peculiar bronzing of the skin, not a jaundice, which was not present in any of his cases; and, lastly, hæmorrhages, which may be toxic, as in leucæmia, and widespread, or mechanical, resulting directly from the condition of the enlarged spleen.

It is to this latter point he wishes to call particular attention, a condition in which for many years hæmorrhages occur from the stomach and bowels. The bleedings are profuse, and in the cases he records have occurred during a period of from nine to twelve years, while in the intervals the patients have regained their flesh and strength and have been able to carry on their occupations.

Hæmorrhage in chronic enlargement of the spleen has, he says, long been recognized by Latour, Franck, Morgagni, and others. The best section on the subject in any modern work is that given in Watson's *Practice*, in which he gives the following explanation: "It seems to me highly probable that one at least of the offices of the spleen is to provide a receptacle or reservoir for this blood, when its free passage through the portal vessels is temporarily obstructed. It then becomes a sort of safety valve (if such an illustration be allowable), which obviates the danger that might otherwise arise to non-vital parts from any great or sudden disturbance of the venous circulation. The stress of the congestion is continually felt in the subcutaneous capillary system, and the hæmorrhage which is apt in such cases to occur from the loaded membrane receives a simple solution, upon principles almost purely mechanical."

When in Montreal, Dr. Osler's attention was called to the subject by the occurrence of several interesting cases, and in 1882 he published a short paper, and reported four cases. Of these, two occurred in leucæmia, and were of special interest, inasmuch as the hæmorrhage was the symptom to call attention to the condi-

tion: in one case, indeed, the diagnosis of leucæmia was only made post mortem. Of the other two cases, one was an instance of ordinary splenic anæmia, in which, in association with a greatly enlarged spleen, the patient had in January and July, 1879, severe hæmorrhages from the stomach, and later in the same year died in a third attack. The fourth case possibly comes in the group to which he particularly wishes to call attention. The patient, a child aged eleven years, had a greatly enlarged spleen without leucæmia. There had been swelling of the abdomen for two or three years, and at her ninth year, two years before he saw her, she had a severe attack of hæmorrhage from the stomach. There was an indefinite history of a previous attack, four years before her visit to him. A month before Dr. Osler saw her she had a very severe attack, in which she vomited in a couple of days nearly three quarts of blood. In the intervals she had thrived well, though she always looked a little pale. The red blood-corpuscles were 2,250,000, white corpuscles, 6,696 to the cubic millimetre.

In 1890 a case of hæmorrhage from the stomach, in association with splenic anæmia, was admitted to the Johns Hopkins Hospital. A young man, aged twenty years, had lived in a malarial district, but had never had chills and fever. In April of 1889, after feeling badly for a month or so, he vomited blood, and afterward passed dark blood in the stools. In May, his physician for the first time noticed an enlargement of the spleen. In June he applied at the out-patient department of the hospital, when he had an extreme degree of anæmia and a greatly enlarged spleen. On admission, January 11, 1890, he had a great deal of pigmentation of the skin, and the spleen was very large, reaching nearly to the navel. The red blood-corpuscles were slightly over 2,000,000 to the cubic millimetre, and the leucocytes a little over 12,000 to the cubic millimetre. He gained rapidly in weight, had no further hæmorrhage, was discharged on March 24th, and has not since been heard from.

Dr. Osler next reports three cases characterized by a remarkably protracted course of from nine to twelve years, during which time hæmorrhages, at times of great severity, took place from the stomach and bowels.

Dr. Osler next records three cases in full detail, and concludes by remarking that the special feature of hæmorrhage he regards as entirely due to mechanical causes. In none of his cases have there been associated cutaneous or retinal hæmorrhages, such as are often seen in leucæmia. He does not think anything can be added to Watson's explanation. In support of this, he refers to the anatomical fact that a very large portion of the blood from the stomach is discharged into the splenic vein. Based on the measurements of the areas of all the main branches of the splenic artery, it has been estimated that of its blood sixty per cent. passes to the spleen, and forty per cent. to the stomach (Mall, Kansas). The veins of the vasa brevia passing from the fundus of the stomach are very large, and though he can find no estimate of the relation which they bear to the other veins of the organ, yet they certainly must drain a very large section of the organ.

The diagnosis of condition associated with enlargement of the spleen is important, but is often complicated, owing to the number of diseases which give evidence of the atrophy of the various tissues of the body in relation to one another. We must not confuse a primitive splenomegaly with a primitive leucæmia, and a splenic count. The cases of chronic enlargement of the spleen, extend-

ing over many years, present, as a rule, an anæmia of a chlorotic type, with low hæmoglobin and low leucocyte count. The more pronounced does the corpuscular anæmia become, the more striking are the changes in the red blood-corpuscles, and in advanced cases the blood may be like that of a pernicious anæmia. The most confusing and puzzling condition, however, is that in which, with enlargement of the spleen, the condition of leucæmia may be presented during one month, and in the following month that of a simple splenic anæmia. A patient at present under his observation had in May and July an extreme degree of leucæmia, while at the end of September, with a moderately enlarged spleen, he had a simple anæmia with a slight increase in the polymuclear leucocytes.

And lastly come the question of the diagnosis from Banti's disease, primitive splenomegaly, with an associated terminal cirrhosis of the liver and jaundice. Osler has never met with an instance; but two of the cases he has reported illustrate how careful one must be in the diagnosis *intra vitam*. All three cases reported in his paper have the chronic character and the severe hæmatemesis, features upon which Banti lays a good deal of stress. There were no changes whatever in the liver in Case I microscopically, and macroscopically in Case II the liver looked perfectly normal. It is to be noted also in the clinical report on both these cases that the area of liver dullness seemed considerably reduced, and in Case I the author was rather inclined to regard the hæmorrhage as of hepatic origin.

Moreover, a certain number of cases of splenic anæmia, he says, present ascites quite early in their course, and an instance of this kind has been recently under his observation in a physician from Illinois, who had an enlarged spleen for at least four years, with ascites in May, 1895. Death occurred in the early part of this year, with ascites. The autopsy showed only an enormously enlarged spleen without cirrhosis of the liver.

Oxycamphor in Dyspnœa.—Dr. Alfred Ehrlich (*Centralblatt für die gesammte Therapie*, 1899, Heft i, S. 1; *American Journal of the Medical Sciences*, April) presents oxycamphor as a remedy for dyspnœa in that it diminishes the irritability of the respiratory centre. This is not obtained by direct oxidation of camphor, but by the replacing of a hydrogen atom by a hydroxyl group in the camphor molecule. It occurs as a colorless, crystalline powder, which when fresh is odorless, soluble up to two per cent. in cold water, but in hot water or alcohol is much more soluble. Its solution is almost tasteless or slightly bitter; is neutral in reaction, and in exhibition of the fresh drug forms an absolutely clear solution. In the presence of light and moisture it readily changes its appearance and composition. Investigation as to the effect of this remedy upon the circulatory system and the temperature shows that its influence thereon is not worthy of mention. To be sure, the pulse rate diminishes to the extent of from ten to twelve beats per minute, but this slowing may be accounted for by the improvement of respiration following its use. It may be administered in compressed tablets with sugar of milk, each containing four grains of the active substance. For administration, to avoid gastric disturbance, the tablets may be dissolved in hot water and given in solution with syrup. Gelatin capsules form a better method of administration. The daily amount taken may be as much as thirty grains. The instances

of its use which are reported seem to confirm the statement made as to its properties. As a direct result of the relief of the dyspnœa, sleep is greater in amount and more restful.

"Oxidized Toxines" in the Treatment of Microbic Diseases.—Dr. George Stoker (*Journal of Laryngology, Rhinology, and Otology*, April) suggests the use of "oxidized toxines" in laryngeal phthisis and other microbial diseases. He says that it is reasonable to suppose that under healthy conditions certain micro-organisms may prove beneficial in maintaining health or promoting healing, but that under unhealthy conditions these same micro-organisms may prove detrimental to health or prevent healing, as witness the *Bacillus coli*, instanced by the late Professor Kanthack. It is also evident, he says, that the secretions or toxines produced by certain micro-organisms, which are in the first instance virulent and deadly, can be so altered as to prove beneficial, as is the case in, for instance, the bacillus of diphtheria. Dr. Stoker's contention is, that the most potent factor in bringing about such a change is the process of oxidation.

The author makes a broth cultivation of bacteria taken from the affected part. This is incubated for fourteen days in an air-tight flask, when a stream of oxygen is passed through the broth for several hours. The organisms are then removed by filtration, and the remaining fluid applied to the affected part as often as experience directs.

He has found special interest in this method in cases of true lupus, and in cases of wounds and ulcers infected with the *Bacillus pyocyaneus*. In cases of lupus the part is first scraped, to remove as far as possible all diseased tissue, and oxygen is then applied by means of a gutta-percha mask as soon as bleeding has stopped. In all such cases reactions have occurred—reactions of an essentially toxic nature. From this it is concluded that the toxines produced on the wounds are oxidized and so altered that, when absorbed, they become antagonistic to the original poison. Acting on this conclusion, oxidized toxines have been prepared and applied in various cases, lupoid and otherwise, with most beneficial results. These artificial oxidized toxines also produce reactions, not, however, so marked as those by the toxines generated on the wound. This may be accounted for by the fact that the chemical change takes place in the oxidizing flask, and not on the diseased surface.

The *Bacillus pyocyaneus* is, in the author's experience, the most persistent and most hostile to healing of any of the micro-organisms usually found in wounds or ulcers. He has known this bacillus to resist the usual germicides, including strong solutions of carbolic or boric acid, the double cyanides, and solution of perchloride of mercury (1 in 500).

If a stream of oxygen is passed through a sterile broth, says the author, no result is observed; if this same broth is inoculated with the *Bacillus pyocyaneus* and incubated without access of air in an air-tight flask for fourteen days, there is no change apparent beyond the usual cloudiness; but if a stream of oxygen is passed through the broth two important changes are observed: 1. The broth at once becomes of a green color, which deepens and intensifies as oxidation is continued. 2. The broth from being liquid becomes glutinous or semigelatinous, showing that the bacilli have modified the character of the broth, and that the oxygen has further altered the broth so modified.

The product of the bacilli plus oxygen is volatile; for if the stream of oxygen be discontinued after a few minutes, the broth will in a few hours resume its original color, but if the stream of oxygen is continued for a few hours the color becomes permanent. When the oxidized toxine is applied to the wounds or ulcers from which the bacilli were originally procured, the result is that after a short time the *Bacillus pyocyaneus* disappears, and only diplococci and staphylococci remain, as may be seen by reference to the slides under the microscopes. It would appear, therefore, that the surest germicide for the *Bacillus pyocyaneus* is its own oxidized toxine; and if this is true of one, why not of others?

The author thinks that in the face of these facts it is no longer possible to say that oxygen does not affect micro-organisms or their toxins; and he suggests that in cases of laryngeal phthisis one should proceed to take a culture from the affected parts, make an oxidized toxine, and apply it frequently.

The Therapeutic Uses of the Salts of Vanadium.—Lyonnet, Martz, and Martin (*Lyon medical*, March 19th) sum up the conclusion of their researches on this subject as follows: 1. The derivatives of vanadium possess an oxidizing power of extraordinary energy, for which power they are employed with great success in the industrial arts. 2. Metavanadate of sodium is a stable salt, soluble in water and easy to study. 3. This salt is very toxic. A rabbit is killed by the intravenous injection of seventeen milligrammes for each kilogramme of weight; the dog, by seventy-nine milligrammes for each kilogramme. The guinea-pig and the frog are also killed by subcutaneous injections. The animals die with symptoms of dyspnoea and convulsions. It has no apparent action on the heart. 4. *In vitro* the metavanadate of sodium acts very slightly on the digestive ferments, the sugar of the blood, yeasts, and microbes. 5. In spite of its toxicity, metavanadate of sodium may be administered to man *per os* without inconvenience, in quantities of from one to five milligrammes (about $\frac{1}{16}$ to $\frac{1}{32}$ grain) in twenty-four hours. It appears preferable to give this salt intermittently on two or three isolated days in the week. It is almost tasteless and is well supported by patients. 6. After the administration of this substance there is noted nearly always a speedy increase in the appetite, vigor, and weight. The amount of urine is slightly increased, the urea and the coefficient of nitrogenous oxidation are augmented. In diabetes the secretion of sugar is temporarily diminished. 7. Combustion is therefore rendered more active. Vanadate of sodium seems to give a spur to nutrition. It does not appear to act by merely oxidizing once for all the various substances of the organism. It would appear rather that after having given up oxygen to the tissues, it recovers it from them and the process begins anew. There would thus be a constant come-and-go movement between vanadic and hypovanadic acids. The vanadate would be a distributor of oxygen for the tissues, acting, so to speak, by virtue of its presence, in almost infinitesimal doses, after the manner of ferments. 8. The metavanadate of sodium has then, in the authors' opinion, a medicinal value superior to that of arsenic, and appears to them the *drug par excellence* for retarded nutrition and cachectic states. The authors have also experimented with a vanadate of iron and vanadate of lithium, and are investigating arseniovanadic acid, a preparation with the formula $\text{Vn}_2\text{O}_5 \cdot \text{As}_2\text{O}_5 \cdot 11\text{H}_2\text{O}$.

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

Meeting of December 14, 1898.

The President, Dr. WALTER B. JOHNSON, in the Chair.

(Continued from page 751.)

Retention of Urine.—Dr. RAMON GUITERAS read a paper on this subject.

Dr. ADOLPH RUPP said he would like to ask the reader of the paper as to one remark that he made: "When we have drawn off about two thirds of the urine from the bladder." In hospital and private practice the catheter was left in until the water ceased to flow. In most of the cases in private practice the urine was drawn off and that was the end of it. The more interesting cases were those that fell into the hands of the specialist, which the general practitioner did not see. In Charity Hospital in the genito-urinary wards he saw some interesting cases. He spoke of the case of a young fellow thirty years of age. Nothing could be passed into the urethra, and, as he did not wish to operate, the patient was put into a hot bath and kept there for five or six hours, but still the catheter could not be passed. Finally, the speaker suggested giving chloroform, and then under the anaesthesia passed a filiform and brought the water away. After that there was no more trouble. He wanted to know how one could tell that he had got about two thirds of the urine, or why one should leave a residuum. In some cases of retention the patient could be relieved in a medical way without any mechanical means. For instance, good-sized doses of salicylate of sodium would give relief without resorting to a catheter or putting a catheter into the hands of the patient.

Dr. HENRY H. SCHROEDER spoke of a class of cases occasionally seen, in which through neglect or ignorance the stricture scarcely allowed a filiform to pass. As a consequence there were a very offensive urine, badly diseased bladder, and an advanced pyelonephritis. He mentioned some cases in which he had used salol and other antisepsics eliminated by means of the urine, with only temporary benefit, the patients getting gradually into a critical condition. In two of the cases, after consultations, it was decided to take more radical measures, in view of the fact that the patients could not live much longer in the existing state of things. Under anaesthesia a filiform was passed and a tunneled sound introduced. This was followed by a catheter through which some urine was drawn. The operation was followed by complete retention of urine, which persisted in spite of all efforts for relief. Paracentesis was resorted to for two or three days, and then, as there seemed to be no prospect of the urine finding its way out by the urethra, a suprapubic incision was made. The patient died, however, so that the effort to produce relief and a period of what might have been well warranted for a few days. The speaker then stated that he would be considered beyond hope of relief, and that if we could confine our efforts to making a catheter.

Dr. GUITERAS said, in regard to Dr. RUPP's remarks, that it was impossible to draw out two thirds of the urine had been drawn off, and that he had said "what we estimate to be two thirds." A normal bladder would usually hold, even in the young, about a

half. Of course, one did find dilated bladders which held two quarts or more; but in cases of that kind one could outline the bladder and determine about how much urine there was in it approximately. It was considered in genito-urinary surgery the most dangerous thing to completely empty the bladder in cases of acute complete retention, as then the blood-vessels of the bladder became engorged, or, in other words, there was congestion, and congestion was the best predisposing cause of cystitis. One of the great difficulties in breaking a patient into catheter life was in knowing when and how to use the catheter. If there were retention of urine and congestion of the bladder wall, there might also be congested ureters and kidneys, and emptying the bladder might also set up an inflammation of these organs. In a great many cases where there was an obstructive cause of retention, there were cystitis, dilated kidneys, and perhaps pyelonephritis; and if one completely emptied the bladder, suppression of urine and death from uremia might follow. Cases of death from collapse had followed the complete emptying of the bladder. The treatment Dr. Rupp referred to in Charity Hospital, where they gave the patient a hot bath and afterward administered chloroform, and inserted a fine, soft-rubber catheter, was one of the ways of treating retention, although he thought it would be better not to give an anæsthetic unless absolutely necessary, and, in case it was, to use laughing gas. Morphine hypodermically would often relieve the spasm. It was much better to perform paracentesis than to force an instrument into the bladder the first time, unless it was to be followed immediately by an operation. In regard to Dr. Schroeder's case, if one could pass a filiform into the bladder, it was well to leave it in, and the next day it would probably be possible to introduce a small catheter. He thought a great deal of harm was done in cases of prostatic obstruction by handling the prostate too roughly; one could not handle these cases too gently.

Book Notices.

Nervous and Mental Diseases. By ARCHIBALD CHURCH, M. D., Professor of Clinical Neurology and of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School (the Chicago Medical College), Chicago, etc.; and FREDERICK PETERSON, M. D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York, etc. With Three Hundred and Five Illustrations. Philadelphia: W. B. Saunders, 1899. Pp. 11 to 813. [Price, \$5.]

It is stated in the preface that "this book has been written for medical students and general practitioners. It makes no claim to be other than a carefully prepared text-book." Such a claim, modest in appearance, is in reality one of no little magnitude. To present in one volume the facts of two great subjects clearly, directly, briefly, and at the same time with thoroughness is an exacting task. Its successful accomplishment by Dr. Church and Dr. Peterson reflects great credit upon the knowledge and literary ability of these gentlemen. The book is not the joint work of two writers, but each author has contributed in his own special department. Dr. Church in neurology and Dr. Peterson in psychiatry. There is thus maintained the individuality of each, and the reader has the benefit of the

special experience of both. At the same time, the uniformity of plan is not affected, and the volume remains a compact, thorough, and modern presentation of the most recent conceptions of nervous and mental disease.

The subjects are treated with clearness, without the style being in the least abrupt or fragmentary—in fact, one only becomes conscious of the brevity, which is uniformly observed, upon noting how few pages are necessary for a clear and complete presentation of a pathological description, a clinical picture, or principles of treatment.

There is, withal, no lack of thoroughness. For the class of readers for which it was intended this treatise is abundantly adequate.

These qualities insure a successful future for this joint labor. To be clear, brief, and thorough, and at the same time authoritative, are merits which insure popularity. The long-suffering medical student and the practitioner not particularly identified with nervous or mental diseases will find in this volume a ready and reliable resource. It bears, furthermore, the mark of careful bookmaking from a publisher's point of view.

Syphilis. Von Dr. ISIDOR NEUMANN, o. ö. Professor der Dermatologie und Syphilis an der Universität Wien. Zweite Auflage. Mit 60 Abbildungen. Wien: Alfred Hölder, 1899. Pp. xv+852.

THE rapid appearance of the second edition of Dr. Neumann's book bespeaks not only the necessity which existed for an exhaustive monograph on this subject, but also the authoritative place occupied by the writings of the Vienna syphilographer. Certainly no living man is better qualified than he to speak *ex cathedra* of syphilis; and this volume reflects a fruitful experience, by personal contact and by literary research, with this "index of civilization." The book is a large one, having 852 pages, many of which are in fine print. But the subject is big, intertwined as it is with every branch of practical medicine and with most important sociological questions. Familiarity with it is essential to every medical man; and for that purpose the present volume is none too comprehensive.

Syphilis is here presented in all its phases and with its many side issues. The views which are expressed on moot points, such as the specific character of the hard chancre, the uselessness of operation upon it, the failure of attempts at animal inoculation, the unknown character of the virus, the best methods of treatment, etc., are the ones best established by the facts and most entitled to credence.

Dr. Neumann's production has taken its place as the modern monograph on syphilis. Its one drawback is a rather heavy style and a lack of clearness in places.

An Epitome of the History of Medicine. By ROSWELL PARK, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a Course of Lectures delivered in the University of Buffalo. Second Edition. Illustrated with Portraits and other Engravings. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. xiv+370.

OUR readers will perhaps recall the fact that the first edition of this work had notice by us almost within the year. The opinion we then expressed of its merit has apparently become general, and we are far from feeling surprise at the early demand for a second edition. The

later edition differs from the earlier only in the correction of a few inaccuracies and in the addition of a chapter upon Iatrotheurgic Symbolism, which is both of interest and of value.

A Manual of Organic Materia Medica. Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms. For the Use of Students, Druggists, Pharmacists, and Physicians. By JOHN M. MAISCHE, Ph. M., Phar. D., Late Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Seventh Edition. Revised by HENRY C. C. MAISCHE, Ph. G., Ph. D., Professor of Materia Medica and Botany in the Medico-chirurgical College of Philadelphia, Department of Pharmacy. With Two Hundred and Eighty-five Illustrations. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. vi-17 to 523.

THE seventh edition of this well-known work is but a modernization of the sixth, the form and scope remaining unchanged and the volume being increased only by the few additions that progress has required. The work remains what it has been since its first appearance, an authority in its field.

Chemistry: General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopœia. A Manual on the Science of Chemistry, and its Application in Medicine and Pharmacy. By JOHN ATTFIELD, F.R.S., Ph.D., of the University of Tübingen, F.I.C., F.C.S., for Thirty-four Years Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. Sixteenth Edition. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. xxii-17 to 780.

NO more need be said of the latest edition of this admirable work than to refer to the very thorough revision and modernizing which is apparent throughout. That so able a work should be perpetuated by frequent rejuvenation is a matter for self-congratulation by all who are students of chemistry. Sixteen editions are a sufficient warranty of the esteem wherein it is held.

BOOKS, ETC., RECEIVED.

The Nose and Throat and their Diseases. By LEONARD BROWNE, F.R.C.S.E., Senior Surgeon to the Central London Throat, Nose, and Ear Hospital, etc. With Special Assistance as follows: Anatomy, by MAYO COOGLIER, M.D., F.R.C.S.; Nervous Diseases, by JAMES CONNELL, M.D.; and Histopathology, by WYATT WINGGERS, M.R.C.S., Assistant Surgeon and Pathologist to the Central London Throat, Nose, and Ear Hospital. With Five Hundred and Fifty Illustrations in Color, etc. Designed and Executed by the Author. Fifth Edition, revised and rewritten. London: Baillière, Tindall, and Cox. Philadelphia: J. B. Lippincott Company, 1899. Pp. xxvi 967.

A Text-book of Anatomy. By AMERICAN ANATOMISTS. Edited by FREDERICK HENRY GARRISH, M.D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. Illustrated with Nine Hundred and Forty-two Engravings in Black and Colors. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. 5 to 917. Price, \$6.50.

The Medical Complications, Accidents, and Sequelæ of Typhoid or Enteric Fever. By ROBERT ANTON-HOLZ,

M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, etc. With a Special Chapter on the Mental Disturbances following Typhoid Fever. By F. X. DORCUM, M.D., Clinical Professor of Diseases of the Nervous System in the Jefferson Medical College. Philadelphia and New York: Lea Brothers & Co., 1899. Pp. vi-17 to 286. [Price, \$2.10.]

The Surgery of the Head and Neck. By LEVI COOPER LANE, A.M., M.D. (Berol.), M.R.C.S. Eng., LL.D., Professor of Surgery in Cooper Medical College, San Francisco. Second Edition. Philadelphia: P. Blakiston, Son, & Co., 1899. Pp. xxx-7 to 1180. [Price, \$5.]

A Review of Recent Legal Decisions affecting Physicians, Dentists, Druggists, and the Public Health. Together with a Brief for the Prosecution of Unlicensed Practitioners of Medicine, Dentistry, or Pharmacy, with a Paper upon Manslaughter, Christian Science and the Law, and other Matter. By W. A. PURRINGTON, of the New York Bar, Counsel of the Dental Society of the State of New York, etc. New York: E. B. Treat & Co., 1899. Pp. 3 to 105. [Price, 50 cents.]

Golden Rules of Medical Practice. By ARTHUR HENRY EVANS, M.D., B.S. (Lond.), F.R.C.S. (Eng.), House Surgeon, Late House Physician and Resident Obstetric House Physician, Westminster Hospital, etc. Golden Rules Series, No. 4. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1899. Pp. 3 to 51. [Price, 1s.]

Die laryngo- und rhinologischen Untersuchungsverfahren. Von Dr. Gustav ABELES, Assistent der Kaiser Franz Josef- (früher Mariahilfer) Ambulatoriums in Wien, praktischer Arzt. Mit 25 Abbildungen im Texte. Leipzig: C. G. Naumann, 1899. Pp. 156. [*Medizinische Bibliothek für praktische Ärzte*, Nr. 139-141.]

Die neuere Geschichte der Medizin. Kurz dargestellt von O. v. BOLLENSTERN, in Bremen. Leipzig: C. G. Naumann, 1899. Pp. vii 398. [*Medizinische Bibliothek für praktische Ärzte*, Nr. 142-147.]

Die Zuckerkrankheit. Von Dr. med. Otto HEDEL, pract. Arzt in Wiesbaden. Leipzig: C. G. Naumann, 1899. Pp. xvi 333. [*Medizinische Bibliothek für praktische Ärzte*, Nr. 148-152.]

New York Eye and Ear Infirmary Reports. Volume VIII. January, 1899.

Report of the Public Education Association of Philadelphia, made at the Eighteenth Annual Meeting.

The Twenty-seventh Annual Report of the Board of Directors of the Zoological Society of Philadelphia.

Medical and Surgical Reports of the Boston City Hospital. Tenth Series.

Annual Report of the Board of Health of the City of Winona, Minnesota. For the Year ending March 31, 1899.

The Differential Diagnosis of Pharyngeal and Esophageal Lesions and Dysphagia. By E. W. S. SMITH, M.D., of Philadelphia. [Reviewed in this *Journal*.] [*Medical Journal*.]

The Surgical Anatomy of the Human Ear. By GEORGE H. THORNTON, with Results of the Dissection of the Ear. By ROBERT CUSTER TUCK, M.D., of New York. [Reviewed in this *Journal*.] [*Medical Journal*.]

Syphilitic Insanity. By A. P. CROFT, with Especial Reference to the Pathology. By GEORGE F. COOPER. By CHARLES K. MOTT, M.D., of Philadelphia. [Reviewed in this *Journal*.] [*Medical Journal*.]

The Influence of Turbinal Hypertrophy upon the Pharynx. By Lewis S. Somers, M. D. [Reprinted from the *University Medical Magazine*.]

Clinical Notes on Nosophen, Antinosine, and Nosophen Gauze. By John S. Perekhan, M. D., of Chicago. [Reprinted from the *Chicago Medical Recorder*.]

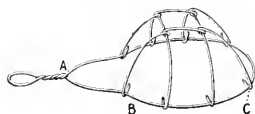
Ueber die Wirkungen und die Indikationen der Traubenkur. Von Dr. Bemo Laquer, in Wiesbaden. [Sonderabdruck aus der *Zeitschrift für diätetische und physikalische Therapie*.]

New Inventions, etc.

A MODIFIED CHLOROFORM INHALER.

By FREDERIC GRIFFITH, M. D.,
NEW YORK.

A MODIFIED chloroform inhaler which I have made from a piece of spring wire may have a point of simplicity deserving of notice.



After twisting the wire into shape, the ends around the base (B-C) were all left long and cut with pointed ends by a twist with the pliers.

The need of sewing the gauze over and the use of the extra wire holder is thus made unnecessary.

A square of double thickness of gauze is cut large enough to cover the wire frame. A hole is made near the selvage end; this passes over and is held at shoulder (A); then the gauze may be readily fastened around the hooks and trimmed.

The frayed ends tucked in will take up any excess of chloroform which may run down from the use of such thin material. A plentiful supply of air is thus not impeded during the anaesthesia.

15 WEST FIFTY-EIGHT STREET.

Miscellany.

The American Orthopaedic Association.—The thirtieth annual meeting will be held in New York on Wednesday, May 31st, and Thursday and Friday, June 1st and 2d, under the presidency of Dr. W. R. Townsend. In addition to the president's address, the programme includes the following papers: Rotation of the Spine in the So-called Lateral Curvature: its Causes and Treatment, by Mr. W. Adams; Clinical Notes relating to the Operation of Arthrodesis, by Dr. B. Bartow; The Forceful Correction of Lateral Curvature, by Dr. E. H. Bradford and Dr. E. G. Brackett, of Boston; On the Treatment of Lateral Curvature of the Spine, by Mr. Bernard E. Brodhurst; Further Observations of Adenoids in Orthopaedic Deformities, by Dr. F. S.

Coolidge, of Chicago; The Operative Treatment of Congenital Luxation of the Hip, by Dr. G. G. Davis, of Philadelphia; *Brisement forcé*, with Immediate Massage in the Ankylosis, following Tuberculous Osteitis of the Knee, by Dr. V. P. Gibney; A Study of Pott's Paraplegia, as effected by Correction of the Spinal Deformity, by Dr. Joel E. Goldthwait, of Boston; A Treatment for Acute Serous Synovitis, permitting Joint Functions, by Dr. Philip Hoffmann, of St. Louis; Pigeon Toe, by Dr. W. Barton Hopkins, of Philadelphia; Prothesis, a Branch of Orthopaedic Practice, by Dr. A. B. Judson; The Cause of Failure after Phelps's Operation for Clubfoot, by Dr. Daniel La Ferte, of Detroit; Joint Changes in Haemophilia, by Dr. Robert W. Lovett, of Boston; Heat as a Therapeutic Measure, by Dr. S. L. McCurdy, of Pittsburgh; Surgical Intervention in Spastic Paralysis, by Dr. B. E. McKenzie; Congenital Dislocation of the Hip, by Dr. T. Halsted Myers; A Preliminary Report of the Study of Lateral Curvature, by Dr. A. M. Phelps; Degeneracy as a Causative Factor in the Production of Scoliosis, by Dr. John Ridlon, of Chicago; A Study of the Musculo-neural Elements in Chronic Joint Disease, by Dr. N. M. Shaffer; Position Symptoms in Joint Disease, by Dr. H. M. Sherman, of San Francisco; The Recording of Lateral Curvature of the Spine, by Mr. E. Noble Smith; The Conservative Surgical Treatment of Tuberculous Diseases of the Joints, by Dr. Clarence L. Starr; Pointers on the Leather Splint, by Dr. A. J. Steele, of St. Louis; The Report of a Case of Dorsal Dislocation of the Hip, occurring Spontaneously during the Course of an Acute Osteomyelitis of the Neck and Shaft of the Femur, by Dr. William J. Taylor, of Philadelphia; Sentences selected from the Orthopaedic Writings of C. Fayette Taylor, M. D., by Dr. Henry Ling Taylor; The Liver in Rickets from a Clinical Standpoint, by Dr. R. T. Taylor, of Baltimore; Some Clinical Features of Rheumatoid Arthritis—A Summer Plaster-of-Paris Jacket, by Dr. R. T. Taylor, of Baltimore, and Dr. S. H. McKim, of Washington; Some Post-paralytic Deformities and their Treatment, by Dr. Jacob Teschner; Congenital Deformities of the Spine, by Dr. Augustus Thorndike, of Boston; Some Remarks on the Class Method of Gymnastic Treatment in Lateral Curvature, by Dr. Walter Truslow, of Brooklyn; The Diagnostic Value of Radiography in Orthopaedic and General Surgery, by Dr. L. A. Weigel, of Rochester; Further Observations on the Treatment of Congenital Dislocation of the Hip, by Dr. Royal Whitman; Forceful Correction of Spinal Deformities under Anaesthesia, by Dr. W. E. Wirt, of Cleveland; and Joint Infection in Typhoid Fever, by Dr. Charles W. Wilson, of Vineland, N. J.

The Hospital Graduates' Club will give its fourteenth anniversary dinner on Saturday evening, June 3d, at the Union Square Hotel.

The Seeming Immunity of Street Cleaners and Prostitutes to the Plague.—The *Cincinnati Clinic* for May 13th, referring to the *Lancet* for February, date not named, calls attention to the fact that the plague, which has already carried off some three hundred thousand people in Bombay, has left the street cleaners and prostitutes comparatively untouched. Of the lowest caste of Indian population, whose very occupation leads them into squalor and filth, the street cleaners, only twenty-one persons out of about a thousand have been affected in three years; while out of some seven thou-

sand prostitutes of various nationalities but one case of bubonic plague has been discovered. These singular facts, if such they are, seem hardly explicable on any known grounds. One would expect that these two classes would be among the greatest sufferers.

The University of Michigan.—The annual commencement will take place on June 22d. Besides the usual ante-commencement ceremonies, the medical department will have a special programme for its friends and the alumni, an unusual number of whom have signified their intention of being present. All the laboratories will be open on the 19th, 20th, and 21st, demonstrations will be made on special subjects in anatomy, histology, pathological anatomy, pharmacology, bacteriology, and medical electricity, and clinics will be given in each clinical branch. We are informed that these exercises will not interfere with those of the general programme or with each other.

The American Dermatological Association.—The twenty-third annual meeting will be held in Philadelphia on Tuesday and Wednesday, May 30th and 31st, and Thursday, June 1st, under the presidency of Dr. John A. Fordyce. In addition to the president's address, the programme contains the following titles: Epithelioma as a Sequence of Psoriasis, and the Probability of its Arsenical Origin, by Dr. Milton B. Hartzell, of Philadelphia; Imperfect or Deficient Urinary Secretion as observed in Connection with Certain Diseases of the Skin, by Dr. L. Duncan Bulkley; Two Epidemics of Alopecia Areata in an Asylum for Girls, by Dr. John T. Bowen, of Boston; A Report of a Case of Congenital Dermatitis Herpetiformis and almost Complete Absence of Finger and Toe Nails, by Dr. Samuel Sherwell, of Brooklyn; A Maculo-anæsthetic Lepidre of the Palm, by Dr. D. W. Montgomery, of San Francisco; A Report on Some Cases of Bilateral Linear Nævus, or So-called Nævus Unius Lateris, by Dr. Isadore Dyer, of New Orleans; The Demonstration of Ringworm and Favus Cultures, by Dr. Sigmund Pollitzer; The Sensory Disorders of Leprosy, by Dr. Prince A. Morrow; Remarks on the Treatment of Scabies, by Dr. Samuel Sherwell; A Contribution to the Histopathology of Epidermolysis Bullosa, by Dr. George T. Elliot; A Contribution to the Study of Blastomyctic Dermatitis, by Dr. James N. Hyde, of Chicago; and Necrotic Granuloma and Indurated Erythema in the same subject, by Dr. James C. Johnston. There will be a general discussion on the rôle of pus organisms in diseases of the skin, which is to be opened by Dr. T. Carson Gilchrist, of Baltimore, and Dr. George T. Elliot.

The "Bemiss Rules" for the Diagnosis of Yellow Fever.—The Louisiana State board of health has lately issued a circular embodying the rules arranged by the late Professor Samuel Bemiss. The circular is substantially as follows:

The following groups of symptoms shall be considered to indicate yellow fever:

Group 1. A person after a sudden attack of fever of one paroxysm, attended with marked congestion or blood stasis of the capillaries of the conjunctivæ, conjunctivæ, and gums, with a history of previous exposure to infection, and no history of a previous attack of yellow fever.

Group 2. A person after a sudden attack has a history of one paroxysm, followed by unusual prostration, albuminous urine, yellowness of the conjunctivæ, and

and having no positively authenticated history of previous attack of yellow fever.

Group 3.—A person has a fever of one paroxysm, albuminous urine, black vomit, suppression of urine, and a general hæmorrhagic tendency under circumstances where exposure to infection is a possibility.

Suspicious Cases of Yellow Fever.—The following symptoms associated with fever of one paroxysm in a patient who has been apparently exposed to infection, and has never had yellow fever, shall be held to justify in either of the six following cases a suspicion of this disease—viz.: 1. Suddenness of attack, either with violent pain in the head and back, injected eyes and face, or marked congestion of the superficial capillaries. 2. Want of that correlation between pulse and temperature usual to other forms of fever. 3. Albuminous urine. 4. Black vomit. 5. General hæmorrhagic tendency. 6. Yellowness of the skin.

The following cases shall also be suspicious: 7. Any case respecting which reputable and experienced physicians disagree as to whether the disease is or is not yellow fever. 8. Any case respecting which efforts are made to conceal its existence, full history, and true nature.

In the event of death in a suspicious case a post-mortem examination should be made, when practicable. Both before and after death yellow fever is especially and preeminently characterized by the fact that it is *par excellence* a hæmorrhagic fever, marked by capillary congestion and its sequelæ; hence post-mortem evidence of a general hæmorrhagic tendency in internal organs, especially in the digestive, in preference to the urinary tract, shall be held to confirm the suspicion.

The Third District Branch of the New York State Medical Association.—The fifteenth annual session will be held in Elmira, on Thursday, June 1st, under the presidency of Dr. F. D. Reese, of Cortland. In addition to the president's address the following papers will be presented: A Case of Extra-uterine Gestation, by Dr. R. Aberdeen, of Syracuse; Nature and Art in the Cure of Disease, by Dr. J. M. Farrington, of Banghamton; Pneumonia in Children, by Dr. H. S. Braman, of Homer; The Medical Expert Witness and his Future, by Dr. T. A. Wales, of Elmira; The Value of Pathological Investigations in Medico-legal Examinations, by Dr. F. Ferguson; Displacements of the Spleen, by Dr. E. W. Higgins, of Cortland; Glenard's Disease, by Dr. L. D. Farnham, of Banghamton; Displacements of the Pelvic Organs, by Dr. E. H. Wiggins; Floating Kidney, by Dr. Joseph D. Bryant; Operations for Strabismus, by Dr. U. H. Brown, of Syracuse; Some Observations in the Care and Treatment of Disease in the American and Cuban Hospitals, by Dr. E. W. Ross, of Elmira; Some Lessons from Colloid Cancer in the Adipon, by Dr. E. D. Ferguson, of Troy; Personal Therapeutic Observations, by Dr. H. D. Dolan, of Syracuse; A Report of a Case of Myxodema, by Dr. John C. Fisher, of Elmira; A Case of Exophthalmic Goitre, with Remarks, by Dr. W. L. Ayer, of Oswego; Some of the Suggestive Cases of the Year, by Dr. J. J. B. of Newburgh; and A Case of Cesarean Section, by Dr. R. Aberdeen, of Syracuse.

The Academy of Medicine of Paris.—We learn from the *Chicago Medical Record* for May that Earl Lester and Dr. Koch have been elected to the associateship of the academy, which is the highest honor of the medical profession of France can bestow.

The Louisiana State Medical Society held its annual meeting in New Orleans on May 16th, 17th, and 18th, when the following officers were elected: President, Dr. W. G. Owen, of White Castle, Louisiana; vice-presidents, Dr. Felix Formento, Dr. F. W. Parham, Dr. W. A. Holloway, Dr. T. E. Schumpert, Dr. J. B. Bonney, and Dr. G. C. Mouton; recording secretary, Dr. H. B. Gessner, of New Orleans; treasurer and librarian, Dr. H. S. Cocram, of New Orleans.

Not so Unlikely Either!—The *Doctor's Factotum* for May and June quotes the following from the *Pittsburgh Chronicle*:

"Now, I suppose," remarked Mrs. Snaggs, "that the surgeons of the army are attached to the medical corps."

"Your supposition does you great credit," replied Mr. Snaggs sarcastically. "It's a wonder you didn't imagine that doctors joined the army for the purpose of building bridges or going up in balloons. Where should army surgeons be, except in the medical corps?"

"Well, I thought that they might possibly belong to the lancets."

The National Confederation of State Medical Examining and Licensing Boards.—The ninth annual meeting will be held in Columbus, Ohio, on Monday, June 5th, under the presidency of Dr. William Warren Potter, of Buffalo. The programme includes the following titles: Address of welcome, by the Hon. Asa S. Bushnell, of Ohio; address of welcome, on the part of the medical profession of Ohio, by Dr. Charles A. L. Reed, of Cincinnati; Response, by Dr. William Bailey, of Louisville; Educational Foundation for a Physician's Special Training, by President James H. Canfield, of the Ohio State University; The Results of the Medical Law of New Jersey, by Dr. Edmund L. B. Godfrey, of Camden, N. J.; The Results of the Medical Law of Kentucky, by Dr. Joseph M. Mathews, of Louisville; The Tennessee Method, by Dr. Thomas J. Hoppel, of Trenton, Tenn.; The Old and the New in Nebraska, by Dr. Benjamin F. Crummer, of Omaha; The Medical Law of New Mexico, by Dr. William R. Tipton, of Las Vegas, N. M.; Thoughts on Preliminary Education, by Dr. Augustus Korndorfer, of Philadelphia; The Unifying Influence of the Three-board System, by Dr. H. M. Paine, of Albany; Cooperation between the Legal Representatives of the Various State Boards, by the Hon. Ralph E. Westfall, of Columbus, Ohio; and On the Preparation of Questions, by Dr. Edward Cranch, of Erie, Pa.

The Skene Hospital for Women.—It is announced that the directors of the projected hospital for self-supporting women have applied to the State board of charities for permission to incorporate.

A Curious Blunder by the Board of Aldermen.—The *New York Times* recently said:

"Not much is to be expected, of course, from our board of aldermen in the way of caution or accuracy in the use of words or the construction of sentences, but surely there must be at least a few men among the city fathers who could have given a little more sense to the first 'whereas' of a resolution sent by them recently to the board of health. That very well intentioned document began: 'Whereas, The practice of healing and curing the sick by unlicensed persons in the city of New York has become an evil which should be stamped out.' Here is an admission of all that is

claimed by the followers and practitioners of 'Christian Science,' 'voodooism,' and every other squalid superstition that has been spawned by ignorance and thriven on credulity. If the 'unlicensed persons' are guilty only of 'the practice of healing and curing the sick' they should all be licensed at once. As a matter of fact, they do no such thing; they only pretend to do it, nine times out of ten, and the tenth time they merely effect what any man can and every man does effect when he tells a friend to cheer up and think of something else than aches and pains. No, it is not the practice of healing and curing the sick that should be stamped out, but the practices of making the sick worse or dead, of swindling folks out of their money and brains, and of spreading infection by the stupid neglect of the commonest sanitary precautions."

The Woman's Hospital.—It is announced that Mr. Russell Sage has lately contributed \$50,000 to the fund for providing new buildings for the hospital.

The Elected American Fellow of the Royal College of Surgeons of England.—Under this heading the *Lancet* for May 13th says that the admission by election of an American surgeon to the fellowship of the Royal College of Surgeons of England at any time would be an interesting event. It is especially so at the present period when in the evolution of history a new recognition is being given everywhere to the essential alliance between England and the United States. In no sphere is this more important or more seemly than in the serene atmosphere of science, and in no branch of science more than in that of medicine. The professors of this branch on both sides of the Atlantic have long vied with each other in every demonstration of friendship and hospitality. We offer our congratulations to Frederic Shepard Dennis, M. D., professor of the principles and practice of surgery in the Bellevue Hospital Medical College, etc., to whom the unprecedented honor, as an American member of the college of twenty years' standing, of election to the fellowship has fallen. The election is not more honorable to Professor Dennis than it is creditable to the college. Few men combine the qualities and the merits of an elected fellow more than he does. His personal devotion to surgery, both as a teacher and a practitioner, and the embodiment in him of all that completes our conception of a genial American gentleman point him out as worthy to receive the compliment paid to him by his college. It is to this genial quality of his nature that he owes not only his large circle of friends in Great Britain and other European countries, but the fact that he has been able to associate with himself as editor so many distinguished compatriots in the compilation of his splendid *System of Surgery*, written throughout by American surgeons.

Medical Men and the Royal Society of London.—It is gratifying to notice the increasing proportion of members of the medical profession who attain the English blue ribbon of scientific distinction, the fellowship of the Royal Society. According to the *British Medical Journal* for May 13th, among this year's selections are to be found the names of Dr. Head, Dr. Starling, Dr. Windle, and Major Bruce, M. B., of the Royal Army Medical Corps.

The Manhattan Eye and Ear Hospital.—We are informed that Dr. H. Hovle Butts was recently appointed surgeon to the throat department of this institution.

Original Communications.

THE DOCTOR OUTSIDE OF MEDICINE.*

By WILLIAM L. STOWELL, M.D.

In 1626 Peter Minuit bartered articles worth twenty-four dollars for Manhattan Island. It is now assessed for more than two billion dollars. Then there was no physician on the island; now there are three thousand dividing the medical honors and striving to divide the dollars. "Each man in his time plays many parts," and the parts played by our profession may well occupy us for a little time.

Perhaps the earliest genuine doctor to arrive was Peter Van der Linde, who came in 1638. When physic was slow he inspected tobacco, and gave part of his time to school teaching. He was also clerk of the church. He could not have had all the obstetric work, because during his time Lysbert Dirksen was town midwife and lived in a house built at public expense. Her successor was voted one hundred guilders (thirty-eight dollars) annually to attend the poor.

About this time (1638-1647) there was in the council of Governor-General Kieft, Dr. John de la Montagne, "a man of intelligence and decision of character," a Protestant refugee from France, who had gone to Holland, and thence here. We find the colonists waging war against the Indians under "command of the indefatigable Montagne," and he later signs the peace treaty with them. There were at this time only a hundred white men on the island. One of them was Surgeon Hans Kierstede, from Saxony, who married Sara, daughter of Annetje Janse, "the famous midwife." This worthy pair had ten children, and so did what they could for the white population. More than that, Surgeon Kierstede was a director for the new church and got up a sort of festival where the guests became very full of good brew. When they were in good spirits he started a subscription for the new church, and the liberal pledges seem to have been all paid when the men were sobered. The property of this same Annetje Janse was the beginning of the great wealth of Trinity Church.

Surgeon Paulus Van der Beeck (1643) becomes rich by farming in Breuckeln, is tax collector and ferry master, and makes people wait for the boat "half a day and night."

Surgeon Jacob Varanger (1651) grows tired of being his own importer and consumer, so petition the council to pay "for the use of his medicament," and to raise his salary as physician to the trading company. Varanger is claimed as one of the founders of the first hospital, yet his name is not in the list of twenty "great

citizens," but among the two hundred and four "small citizens."

A little later on (1657) another composite doctor arrives—Samuel Megapolensis, son of Reverend Megapolensis. He is a Harvard graduate, who studied theology in Utrecht, and upon his return was appointed pastor of the church. He continued the rare art of both preaching and practising, and also did his part in politics, as appears from his being one of the commissioners at the English capitulation (1664).

In those days the palisade was along the present Wall Street. The only remaining relic of these early Dutch times is a portion of the foundation walls of 71 and 73 Pearl Street.

Those who died were buried just north of Bowling Green.

In 1666 Peter Harris, both physician and surgeon, was authorized to "exercise his art."

The term surgeon had been applied to ships' barbers, and had not the honor we now give it.

Gaudineau (1686), a Huguenot, also signs himself *chirurgo-physician*. He appears as lieutenant under Dongan in the French and Indian War (1708). There may be no significance in names, but it is curious to note that the first autopsy was held (1691) upon the body of Governor Slaughter, whose sudden death was thought to be due to poisoning. Dr. Johannes Kerfbyle, of Leyden, officiated.

The doctors did some fighting, not with Indians, as appears from the duel between Governor Dongan's nephew Thomas and Dr. John Livingston. The latter was killed and Dongan convicted of manslaughter.

In 1705 law and medicine combined in the person of Dr. Bridges, for a brief time chief justice.

In early days slavery flourished here, and a slave market was established in 1709 at the foot of Wall Street. Dr. Dupay was a slave owner, for we find that he wants £55 for a negro wench nineteen years old whom he had brought up from infancy. She did not like being sold on approval, and a few years later is again offered for sale, "as she has a great itch for running away."

Quarantine was hastily established, in 1710, on Governor's Island, then Mutton Island. Three thousand German Lutherans had left Plamotta to come here to make tar, cut masts, etc. Four hundred and seventy of them were buried at sea. The council was dismayed when the large remainder arrived, and, "fearing distempers," appointed Dr. Garrin, Dr. Law, and Dr. Moore to inspect the immigrants. Carpenters were also sent to build huts for them.

In 1725 Bedloe's Island was used as a quarantine for small-pox patients from Madeira.

About 1735 an almshouse, a public workhouse and house of correction, was built in the fields or park. It was on the site of the present city hall. Here slaves

* Read before the Society of the Alumni of the City Charities Hospital, February 9, 1899.

were kept for correction and the poor sheltered. Besides a salary, the keeper received fees from all who entered or were discharged, and 1s. 6d. for whipping. In 1764 the keeper was allowed £20 extra, as there had been no whipper for some time.

The second floor room on the Broadway side was the hospital ward, containing six beds. Dr. John Van Beuren was in charge on a salary of £100 a year.

It was here that Dr. Beckman Van Beuren introduced vaccination in the face of much opposition.

Dr. Gerardus Beekman, as president of the council, filled the executive chair in 1710 until the new governor arrived. He was a wealthy landholder, lieutenant-colonel of militia, etc. He was "the great gunner who shot a deer in city common, the antlers of which are still preserved in the family." He was one of the eight men condemned with Leisler when the latter was executed for treason in refusing to give up the fort. The doctor wrote to the governor that he wished to visit some patients on Long Island that were "very dangerous." Having leave to go, he neglected to come back to be executed.

Upon the arrival of Governor Clinton, in 1743, George Clarke returned to England said to be worth £100,000, "so profitable was it to rule New York." Ten years later Sir Danvers was governor. He had been deranged by grief at the loss of his wife, and two days after arriving here hanged himself from the fence in Mr. Murray's garden. Dr. Magraw, "the best physician in town," had ordered him sack and whey the day before, but he had refused it, telling the servant to prepare broth. Mr. Murray seemed to think this a sure evidence of madness. In 1743, Dr. McGrath introduced free cold bathing for the cure of fevers. He was an unrefined, captious man who was himself often "in hot water." These were troublous days in the colony. Small-pox and yellow fever prevailed (1737 and 1739), the Jews were disfranchised (1738), and thirty-four negroes and whites were executed for a plot to burn the city (1741).

About this time (1745) Dr. John Nichol died. He was an active practitioner and useful man, a member of the governor's council. In the same year Mr. John Dupuy, M. D., the man midwife, died, of whom the paper stated, "in which loss it may be truly said, as of Goliath's sword, 'there was none like unto him.'"

The most conspicuous physician of the last century was probably Cadwallader Colden (1688-1776). He was a Scotchman by birth. Wilson calls him "one of the ablest men in the province," and well he may. He graduated from the University of Edinburgh, studied medicine in London, and practised the same in Philadelphia for several years. Governor Hunter induced him to come to New York and made him first surveyor general in the colonies. The governor suffered much from sciatica, and finally returned home. In a letter he says: "I have no hope of ease on this side, having try'd

all remedies, Christian and Pagan, Polemical, Chymical, and Whimsical, to no purpose. Aix-la-Chapelle is all my present comfort." Colden's favorite study was botany, and he sent to Linnæus three or four hundred American plants. His pen was ever busy. He wrote on yellow fever, a *History of the Five Indian Nations of Canada*, and numerous scientific articles. He was for fifty years in his Majesty's council, and for twelve years lieutenant-governor. On account of the stamp act in 1765 a procession of citizens burned in effigy Colden and the devil; however, at another time fifty-six merchants congratulated him on his administration. At one time he had a country seat near Newburg, and again a large farm on Long Island. His intellectual capacity and attainments were great and various, one biographer saying that he was "known in the scientific and literary world as a physician, botanist, astronomer, and historian." He was the first to suggest the formation of the American Philosophical Society. He was loyal to the crown all his life, and died at the ripe age of eighty-eight years, in 1776, just after the English occupied New York.

The revolutionary period supplies medical anecdotes as well as war history. Dr. James Beckman erected a house in 1764 upon the bluff above East River at what is now Fifty-second Street. It stood there until 1874. This is a familiar spot to us of Charity Hospital. This historic house was at times occupied by such notables as General Howe, Sir Henry Clinton, and Madame de Riedesel. In the greenhouse there Nathan Hale was tried as a spy on September 21, 1776. He was then taken to City Hall Park and executed, not far from where his statue now stands.

The most important day this country ever saw was July 4, 1776, when the delegates from the thirteen colonies assembled in congress and declared American independence. All the fifty-six delegates present signed, and five of them were physicians. They were as follows:

Lyman Hall, from Georgia, a successful practitioner, afterward governor.

Benjamin Rush, graduate of Princeton when fifteen years old, who became professor of chemistry in the College of Philadelphia when twenty-four years old. He was surgeon-general of the hospitals during the war, and for the last fourteen years of his life treasurer of the United States Mint.

Oliver Woolcott, of Connecticut, was major-general in the army and held many high public offices, including that of governor. He and Hall were classmates in Yale in 1717.

Josiah Bartlett, of New Hampshire, was a "noble patriot"; for ten years in legislature and congress, governor of his State, justice of the supreme court, and first president of the State Medical Society.

The last signer was Dr. Mathew Thornton, from Londonderry, New Hampshire. He was a practitioner

and "most ardent patriot," whose monument bears the simple inscription "An honest man."

New York sent few doctors to the war, but among these zealous patriots are mentioned James Brewer, Moses Younglove, Ebenezer White, and Daniel Menema. She had seventeen original members in the Society of Cincinnati.

In 1790 congress removed from City Hall, New York, to Philadelphia. On October 14th of that year the medical society was allowed to use the council chamber for its meeting. There Dr. Nicholas Romaine gave medical lectures a year or two later.

At that time the medical society numbered twenty-eight members. Among the noteworthy men were Dr. John Bard and his son, Dr. Samuel Bard, who operated upon the carbuncle that afflicted George Washington.

Dr. John Bard (1716-1799) was a very eminent man, noted for his urbanity of manner as well as great learning. He established the first quarantine at Bedloe's Island, and was first president of the New York Medical Society organized in 1788. He was usually dressed in a red coat and cocked hat and carried a gold-headed cane. He drove in a low phaeton and was accompanied by a colored servant.

Samuel Bard (1742-1821), son of John, graduated at Columbia, and took his M. D. in Edinburgh. He organized the first medical school with Columbia, then King's College, and in 1769 took the chair of physic. He was dean of the faculty.

Dr. John Cochrane was evidently a man of wealth, as he lived on Broadway and entertained the generals of the army in a royal manner (Lamb).

No one enjoyed a higher social position and influence at this time than Mrs. John Jay. On one date, her only guests at dinner were Dr. and Mrs. John Charlton. Charlton was an English surgeon from the court of George III, who came with the army. He married Mary de Peyster. He usually rode on horseback, but practised little. In 1795 yellow fever again raged. The cabin boy and surgeon of a West Indian ship were the first to die. The disease spread, only to be checked by the frosts of November. Governor Jay then set Thursday, November 26th, as Thanksgiving day, as had previously been done in Massachusetts. More than fifteen hundred persons had died of the population of fifty thousand. This scourge resulted in underground sewers being begun. At this time there were one hundred students in Columbia and fifty more studying medicine.

Professor McMaster, writing on yellow fever, gives this interesting picture: "If the purchaser of the vinegar (for prevention) were a nervous man and tormented with hourly fear of being stricken with the fever, the spectacle he presented as he sallied forth to buy was most pitiable. As he shut his house door he was careful to have a piece of tarred rope in either hand, a sponge wet with camphor at the nose, and in his pocket a hand-

kerchief well soaked in the last preventive of which he had heard. . . . If he were so unhappy as to meet a friend on the way, neither shook hands, but exchanging a few words at a distance, each sought, bowing and scraping, to get to the windward of the other as he passed. When at last the shop was reached, nothing could induce him to enter while another stood at the counter, or was seen approaching on the street" (Wilson).

April 13, 1788, was the date of the "Doctors' Riot." This was caused by some inquisitive boys discovering the hospital doctors dissecting. They spread ghastly tales and soon had an angry mob after the young medics. The doctors sought safety in the jail, but barely escaped being removed from there. Dr. Hicks was hiding behind the chimney of his preceptor's house (Dr. Cochrane) while the mob were below, looking for him and evidences of his dissecting. The trouble lasted part of two or three days and was only quelled by the militia. Baron Steuben and Secretary Jay were endeavoring to quiet the mob by speeches when both were injured by flying missiles. Steuben was just praying that the soldiers should not be allowed to shoot when he was hit upon the head with a brick. As he fell he cried out, "Fire, Governor, fire!" and it was done.

Nicholas Romayne was a native New Yorker, 1765-1817. His weight of three hundred pounds did not affect his activity. He was "vested with almost all the honors the medical profession can bestow." He could upon invitation "lecture on the aphorisms of Hippocrates, unfold the structure of the brain, expound the philosophy of paludal diseases, or discourse on the plant which Clausius cherished." He was "at all times assiduous in civic pursuits and closet studies," a type of what a physician should be to a community.

Dr. Hugh Williamson (1735-1819) was another man of many gifts. He was ordained to preach, but gave up because of his health. He studied medicine in Edinburgh and Utrecht and practised successfully in Philadelphia. He was surgeon in the army, member of the North Carolina House of Commons, delegate to the convention to frame the Constitution, and was elected as a federalist to the first congress.

In Philadelphia he was professor of mathematics and one of a commission to observe the transit of Venus and Mercury.

Seventeen hundred and ninety-eight was marked by the invention of the steamboat. In March of that year Dr. Samuel L. Mitchell, then a representative in the legislature, introduced an act granting the exclusive right to navigate the New York waters by fire or steam for twenty years. The bill was passed very much as a joke. In April, 1807, Fulton actually made the trip from New York to Albany in the *Clermont* at the rate of five miles an hour. Dr. Mitchell was one of the passengers, and, as Golden was backing the scheme, he was most probably there also.

The most remarkable man of his time was Samuel Latham Mitchell, M. D., LL. D. (1764-1831). He graduated in medicine in Edinburgh, and returning here studied law with Chief-Justice Yates.

For twenty years he was visiting physician to New York Hospital. As a teacher, he was professor of chemistry and natural history in Columbia, professor of botany and materia medica in the College of Physicians and Surgeons, and one of the faculty of the Rutgers Medical School. His analysis of the Saratoga mineral waters helped their fame.

In 1796 he made a geological and mineralogical tour of the State, the published results of which laid the basis of his European reputation.

In 1797, together with Dr. Edward Miller and Dr. Elisha H. Smith, he founded (and for sixteen years edited) the *Medical Repository*, the first medical journal in this country.

His knowledge of the Indians was thorough. When they gave exhibitions at the Elgin Gardens he would translate their war songs; and because of his legal knowledge he was sent to make a treaty with them.

In politics he was in the State legislature working hard with Cadwallader Colden and Governor De Witt Clinton for the Erie Canal. In 1825 it was opened with the greatest naval fête the city had ever witnessed. Dr. Mitchell had procured bottles of water from the thirteen largest rivers in the world—Ganges, Nile, Mississippi, Amazon, etc.—and united them all in this artificial waterway. The doctor counted it the proudest day of his life when the inland lakes and ocean were united in “indissoluble marriage.” It cost \$7,602,000 then. We heard more about its cost last autumn. With Williams we find him working for the furtherance of West Point Military Academy. As United States senator he puts his energies into improved quarantine laws. With the ever-active Colden and others he established the Deaf and Dumb Institute. When State aid was wanted for the Botanical Gardens at Fiftieth Street, he talked for hours to the legislature, and that without special preparation. Naturally, he was among the incorporators of the Society for the Establishment of Free Schools in 1805.

Socially he was a delightful companion, not an abstract philosopher. He was Sachem of Tammany Society, was an active member of nearly all the learned societies of the world, and yet found time to preside over the “Krout Club,” or discuss conchology with Dr. Samuel Akerly, his brother-in-law.

His writings include *Theory of the Earth and Solar System*, *Phosphorescence of the Ocean*, *Anatomy and Physiology of the Shark*, a description of the fishes about New York (one hundred and sixty-six varieties), and *The Ethnology of the Indian*.

It is little wonder that Dr. Francis called him “the Nestor of American science.”

In St. Paul's churchyard at Vesey Street, on the

Broadway side, there stands near the fence a large monument which you have probably all seen, but perhaps not stopped to observe. It is that of the Irish patriot who made this his adopted home. Dr. William James Macnevin (1763-1841) was educated in Vienna, practised in Dublin, traveled in and wrote of Switzerland, and spent four years in an Irish jail. “He had no prison house; worth, freedom, Wisdom still can walk at large, though bolts and bars, and walls of adamant may intervene.” He translated from the original Gaelic, and compiled a French grammar for the children of Thomas Addis Emmet, his fellow prisoner.

On July 4, 1804, he landed here, and at once began practice. He gave clinics in the almshouse (1807), and was professor of midwifery in the College of Physicians and Surgeons, and professor of materia medica in Rutgers Medical School. He was also professor of chemistry. Dr. Francis says that “the stores of ancient and modern science were equally accessible to him, and he was ever ready to communicate.” When he died, “all felt that learning had lost a distinguished ornament, . . . the charities of life an ardent friend, and patriotism one who had sustained martyrdom in her glorious cause.”

Another man in the faculty with Dr. Mott, Dr. Macnevin, and Dr. Francis was Dr. David Hosack, “distinguished beyond all his competitors in the healing art” (1769-1835). Beginning with materia medica, he became professor in all the branches except anatomy and surgery. In 1804 he had to do with a tragedy which is a part of our history. When Alexander Hamilton was shot by Vice-President Burr on that early July morning at the Weehawken dueling ground, Hosack was waiting for him in a boat below the cliff. This was the untimely end of the great Hamilton, and the end of dueling in this country.

Dr. Hosack's favorite study was botany, and in 1801 he succeeded in establishing the State Botanical Garden upon twenty acres bounded by Forty-seventh and Fifty-first Streets, between Fifth and Sixth Avenues. This was for the “conservation of our indigenous botany, or as a repository of the most precious exotics.” It was a curious and valuable place in many ways, but not very useful, so the property was turned over to Columbia College. You all know how valuable the ground has proved to it. Dr. Hosack was one of the originators of the New York Historical Society, and twelve years its president.

In 1824, when Lafayette revisited America after half a century of absence, he was shown all possible honors, and Dr. Hosack, conducting him to the chair that once belonged to Louis XVI, “in a graceful speech tendered him his election as an honorary member of the Historical Society.”

His name is connected with most wise and great affairs of his day. It was he who established the library

of New York Hospital which has now been (1898) transferred to the Academy of Medicine.

"It was not infrequently remarked that Clinton, Hosack, and Hobart were a tripod on which our city stood."

Another botanical M. D. was James E. De Kay (1792-1851), an all-round naturalist. His travels took him to Turkey, where he became superintendent of the naval yards. He returned to Oyster Bay, near his intimate friend, the poet Bryant. Though he cared little for practice, he came here at once to help care for the cholera patients, and wrote chiefly for the New York press.

John W. Draper, M. D. (1811-1882), chemist and physiologist, was a many-sided man. After practising a few years in Virginia he came here, and with Mott and others founded the New York University Medical College. He did much in the early days for photography. It was he who first photographed from high-power microscope lenses. He wrote with equal ease upon chemistry, *Intellectual Development of Europe*, *The Future Policy of America*, and the *Conflict between Religion and Science*.

Contemporaneous with Dr. Draper, though older, was another M. D. who did not practise—Peter Irving (1771-1838), M. D., from Columbia. Peter was brother of Washington Irving, and helped the latter with the immortal *Knickerbocker's History of New York*. He found the pen mightier than the bistouri, and after traveling widely abroad led a literary life, being noted for his "classical acquisition and *belles-lettres* knowledge."

Medicine combined with art in the anatomical lectures given by Dr. T. G. King before the National Academy of Design. The academy originated with S. F. B. Morse, of telegraphic fame, who was its president for many years. He was a great painter, especially of portraits. One of Lafayette by him is still in the City Hall. Morse and King continued the anatomical lectures many years.

In January, 1831, chemists, physicians, and others began to agitate the subject of pure water. Dr. De Kay prepared a report including a quotation from Devoe in 1798, to wit: "The collect behind the tea-water pump is a shocking hole, where all impure things centre together and engender the worst of unwholesome productions." All this is now completely changed; the shocking hole has been filled up, and in or on its place stands the Criminal Court Building, where the New York Health Department resides and engenders hygienic laws and antitoxines instead of "unwholesome productions." The Croton water supply was brought to the city with a great celebration in 1842, having cost twelve million dollars.

In the medical history of New York no one took so great an interest as John W. Francis, M. D., LL. D. (1789-1861). In 1809 Dr. Francis was the first man

to receive the degree of M. D. from the College of Physicians and Surgeons. He later was professor of materia medica, of medical jurisprudence, and of obstetrics there. He was greatly interested in all the hospitals, asylums, and benevolent institutions of his time. He said "You might as well create a practical navigator by residence in a sylvan retreat as furnish a physician without hospital experience."

Dr. Francis was the medical friend of the leading actors from Cooke to Macready. Kean went with him to Vauxhall Garden (where Astor Library now is) and turned somersaults there. They then went to Bloomington, as Kean was anxious to see if our insane were like those in England. He nearly ended his own life on this trip. Dr. Francis wrote various medical papers, but is now best remembered by his *Old New York*, or *Reminiscences of Sixty Years*. Though a busy practitioner, he had time for the meetings of the famous "Bread and Cheese Club," where he met the naturalist Dr. De Kay and Charles King, later president of Columbia.

Dr. Kane, the Arctic explorer, was born in Philadelphia in 1820, and entered the navy as surgeon. He was a great traveler, and visited all parts of the world while on duty or during furloughs. During the Mexican War (1846) he was with the military staff. Being a naturalist as well as a sailor, he went with the first Grinnell Expedition from here in 1850. In 1853 he commanded the *Advance*, and first definitely determined the existence of an open polar sea. His expedition accomplished more than any preceding one, and brought him honor and fame. His health failed, and he sought relief in Havana, where he died in February, 1857.

Another man to whom we New Yorkers are especially indebted is Rufus H. Gilbert, M. D. (1832-1885), who invented the elevated railroad. He was a student of Willard Parker, and graduate of the College of Physicians and Surgeons. In 1862 he was surgeon to the Duryea Zouaves, and performed the first surgical operation under fire at Big Bethel. Later he was director of the army hospitals. After the war his health failed, and he became assistant superintendent of the Jersey Central Railroad. He was greatly interested in the overcrowding of the poor districts, and so labored to find a way of relief. The original elevated railroad, from Battery Place through Greenwich Street to Thirtieth Street, was begun in 1867. Dr. Gilbert at first held a large amount of the stock, but he lost most of it, and his death was really hastened by anxiety and disappointment.

In these days of interchanging war and peace we are reminded of Richard J. Gatling, M. D. (1818), who is still living in our city. His inventions so filled his mind that he never practised medicine. When a boy he perfected a cotton-seed sower and a wheat drill. (How he might have helped the gynecologist with cases of sterility!) In 1861 he invented the revolving gun

which was tried by General Butler and later adopted by the United States service. It is, as you know, virtually ten breech-loading rifle barrels together, and can now deliver twelve hundred shots a minute. Its efficiency may be learned by reference to the Manila battles of recent dates.

Of all medical men and patriots there is none whose history is so romantic or whose deeds are so daring and magnificent as those of Marcus Whitman. His name is inseparable from that rich territory

"Where rolls the Oregon, and bears no sound
Save his own dashings."

In 1836 he left this State with his young wife for a bridal tour of thirty-five hundred miles. When the party reached Fort Laramie the garrison tried to prevent his going beyond with his "old wagon." The great forests were then occupied only by Indians and traders of United States origin or belonging to the Hudson Bay Company. There this little band meant to go and did go. In 1842, six years late, Whitman was visiting a patient at Walla Walla and attended a dinner of traders and others where an express rider announced that a quantity of immigrants were two hundred or three hundred miles above, coming down there. An enthusiastic priest jumped up, shouting, "Hurrah for Oregon! America is too late!" Whitman grasped the situation, and left for home. In twenty-four hours he had started, in spite of all entreaties not to do so, to ride to Washington to see Webster before the Ashburton treaty should be signed and Oregon lost to the United States. It was a rich possession, of thirty-two times the size of Massachusetts, and Whitman's residence there six years showed him its value. The experiences of four months of winter spent in the saddle, pushing on constantly over mountain passes, through forests, swimming rivers frozen half over, at times eating dog meat and mule meat, and once being wholly lost—what history it is, and what an indomitable will the man had! Mr. Lovejoy and the guides were his companions, yet he may be said to have made the trip alone.

After five months' travel he reached Webster at Washington, and set aside all the arguments against the worthless and inaccessible land. When told that wagons never could be taken over the mountains, his sufficient reply was, "My wagon is there now." He returned on September 4, 1843, with two hundred wagons and nearly a thousand persons (eight hundred and seventy-five) and thirteen hundred head of cattle.

Daniel Webster said, "It is safe to assert that our country owes it to Dr. Whitman and his associate missionaries that all the territory west of the Rocky Mountains and south as far as the Columbia River is not now owned by England." The rides of Paul Revere and Sheridan were momentous, but Whitman outdistanced them and saved us six thousand miles of Pacific coast and inestimable wealth yet to be secured. Poor

Whitman and his family were massacred in November, 1847. Compare his journey with a trip by the Northern Pacific or Sunset Limited. Since his day our western horizon has been pushed seventy-five hundred miles farther.

I can not well refrain from reference to one eminent doctor now living and very active—Dr. Leonard Wood, now brigadier-general and military governor of Santiago. Governor Roosevelt, his long-time friend, counts him one of our most superior public men. He received his medical diploma from Harvard in 1882, and for a short time practised in Boston. His adventurous spirit led him into the army, and shortly we find him with General Miles fighting the Apaches. His great power of endurance, his kindly manner, and unusually sound judgment soon made him the natural leader of some of the detachments sent out. He soon won the medal of honor. It was the most natural thing in the world that he should command that unique regiment, the Rough Riders, and his evident executive ability and justice made him the natural selection as governor of the province. He is a man whom we may proudly claim as one of us, though he has grown out of medicine.

There is one doctor who belonged to all English-reading people—Oliver Wendell Holmes, M. D., LL. D. (1809–1894), the "autocrat," "professor," and "poet." A student of law, then of medicine; professor of anatomy and physiology for forty-four years in Dartmouth and Harvard; a poet from his college days to the end of his long life. The dry subject of anatomy he enlivened by comparing the sweat glands to a fairy's intestine, and the mesentery to shirt ruffles of a former generation. He wrote *Lectures on Homœopathy and Kindred Delusions*, and many other medical topics, yet found time to write fourteen volumes not medical.

Dr. Holmes was pre-eminently the poet for occasions

"When the tongue has grown loose
And the waistband grown tight."

He frequently came to New York (where else can a Boston man go?)—in 1853, to attend the meeting of the American Medical Association, and later the semi-centennial of the New England Society. When the new Fifth Avenue Theatre was opened, "they were something more perplexed for poets than for port and sherry," and Dr. Holmes was the poet guest. His most notable visit here was in 1883, when the New York medical profession honored itself in honoring him with a dinner at Delmonico's. Two hundred and fifty most eminent physicians and guests united in paying tribute to the genius, wit, and learning of the doctor-poet, who could

"... show with demonstrator's art
The complex chambers of the heart,
Or, armed with diviner skill,
To make it pulsate at his will."

Among the speakers were Dr. Barker, Dr. A. H. Smith, and Dr. T. G. Thomas, the Hon. William M.

Evarts, George William Curtis, Whitelaw Reid, and, best of all, the doctor himself in a poem.

This paper must have an end, and perhaps it had better be here. We have found that the knowledge of medicine adds to the efficiency of those possessing it; that it is compatible with many things else—law, preaching, literature, painting, poetry, natural history, exploration, astronomy, invention both in the arts of war and peace, and adds dignity, honor, and usefulness to a man in any profession.

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SOME FURTHER OBSERVATIONS ON OBSTETRIC CASES.*

By JOHN H. BARRY, M.D.,
 PHYSICIAN TO ST. JOHN'S HOSPITAL, LONG ISLAND CITY.

EXACTLY three years ago the writer had the signal pleasure of reading before this society a report, published later in the *New York Medical Journal*, of two hundred and fifty maternity cases treated by him.

He then called attention to his extreme good fortune in having encountered a most unique and anomalous experience, and in having been favored by most satisfactory and flattering results. And in recording now the noteworthy points in slightly more than a hundred additional cases since that time he lays a humble claim to a continuance of said uniqueness, and acknowledges an obsequious gratefulness to Him who has visited a like good fortune upon his more recent efforts. For, although, in respect to a few conditions at least, his infant mortality may have been disappointing, yet the consciousness of diligent effort to succeed, tempered by the hope that years may bring increased success, has been a most comforting and consoling consideration.

I mean to touch to-day, gentlemen, with your kind permission, upon many most divergent obstetrical points, writing an essay upon none, but discussing, here briefly and there at more liberal scope, details of presentations, diagnosis, and manipulations which form, to

my mind, the elements of the successful conduct of a maternity case.

The intelligent observation and industry brought to the study of this ever-absorbing branch of the physician's art, the genius, tact, and acumen daily unearthed to a welcoming and receptive scientific world, make us of feeble attainments halt at a point far below where originality, invention, and discovery begin. So that I may be pardoned if I fail to startle with revelations of hitherto-unsolved problems, or illuminate with a calcium glow realms one would fain traverse even under the guidance of any of the bright lights of the obstetrical firmament. A summary of the afore-mentioned cases would show about the following:

Normal vertex:

Spontaneous and uncomplicated delivery.. 82

Forceps cases:

Normally engaging vertex..... 8

Occipito-posterior (rotation occurring)... 7

Occipito-posterior (rotation not occurring) 4

Knee presentation:

Occipito-posterior in after-coming head... 1

Transverse:

Cephalic version..... 1

Podalic version..... 1

Elbow presentation:

Shoulder, and prolapse of cord..... 1

Vertex, and prolapse of cord..... 2

Twins 2

Eclampsia 1

Pulmonary infarction complicating delivery. 1

Complications and sequelæ:

Malarial fever, very frequent.

Acute mania..... 1

Face rotating completely around in otherwise normal cases..... 2

Phlegmasia alba dolens..... 4

Adherent placenta..... 4

Adherent membranes 6

Noteworthy points:

As to diagnosis of faulty presentations.

As to shoulder extraction.

As to diagnosis of living child in transit.

As to false pains of labor.

As to seeming association of more or less adherent placenta with fairly good-sized children.

As to quinine by proxy for infants.

As to needlessness of worry about delayed labor when not begun upon rupture of membranes.

In the broad scope that this list might permit, one must necessarily confine himself in particular to a few of the conditions, making cursory remarks only of many of the points which it suggests. I have thought it well to select for the broadest discussion occipito-posterior cases, shoulder extraction, and malarial fever in the puerperium.

Now, as to occipito-posterior cases: Not without rea-

* Read before the Medical Society of the County of Queens, February 28, 1899.

son have these cases been portrayed to us as portentous and difficult. Those of you who have met with any of said cases have doubtless had them deeply ingrafted upon your memories. Mention has been made in the paper previously alluded to of two cases, in one of which rotation occurred, the diagnosis not having been made. The other was tedious, but occurred in a most vigorous woman, and nothing amiss or untoward was observed, even though the head was born with the face directly anterior.

The cases of vertex, oblique to the pelvis, with the occiput to the rear when grasped by the forceps, and rotation occurring when the head reached the perinaeum, being but a step removed from occipito-posterior, strictly so called, will be discussed side by side with the latter.

The first case in the present group was attended April 7, 1896. In this case, as in the rest of this classification, I quote *verbatim* from notes taken at the time. Occipito-posterior position; forceps. Rotation of the head complete when the head reached the perinaeum, carrying the forceps completely around with it. Eclampsia in the mother in her previous confinement; œdematous, nephritic condition of the mother in the present one. Moderate perineal laceration; repair; green-stick fracture of upper third of humerus occasioned in the manual extraction of the shoulders; union perfect; pressure paralysis of arm for four days.

CASE II. *Transverse Position of Vertex*.—November 7, 1896. Labor of ten hours' duration; forceps delivery; blade marking over brow; subsequent swelling of eye; slow shoulder delivery; several minutes taken up in resuscitating the child; adherent placenta; fifty minutes of intermittent effort over expression of placenta, one third of its bulk pointing out of the vulva; laceration of the right vaginal lip; healing by granulation. Placenta delivered by the hand carried to the fundus of the uterus. Beefsteak placenta; curettement, under ether, twenty hours after delivery. Attachment of placenta was very firm, evidently due to a placentitis, pain having been complained of for some time over the left side of the fundus of the uterus, where the placenta was most firm. Temperature was only once 101° F. (fifth day); very slight fever from discharge; nervous, quick pulse throughout puerperium. Evidences of air hunger and weakened circulation twenty-four hours after delivery. Inhalation of oxygen very efficient; given when pulse rate was 160. Phlegmasia alba dolens upon getting up.

CASE III.—March 22, 1897, called to assist Dr. Bumster. Diagnosis vague before chloroform anesthesia; face, inclining to a brow presentation, easily made out after anesthesia. Head, engaging in transverse diameter of pelvis, face to the right of the mother; membranes ruptured some hours. TempORIZED a short while; some advance made under natural pains; face points becoming lost; diagnosed occiput to rear when head had engaged somewhat. Forceps applied after an hour's wait; slipping of same. Some advance with the forceps when traction was made distinctly backward. Forceps unlocked and reapplied; the head was brought down on the perinaeum with face directly anterior. Chin easily brought out below pubes. No rotation of shoulders; most difficult extraction of the same; little or no expulsive pain. Supposed fracture of

base of skull of babe; died in three hours. Adherent placenta; seventy-five minutes taken up in its delivery. Uneventful recovery of the mother; no laceration.

CASE IV. *Occipito-posterior of After-coming Head of a Knee Presentation*.—March 26, 1897, assisted by Dr. Bumster. Left-knee and right-foot presentation. Membranes ruptured eight hours; no pains of consequence; feet brought down under slight chloroform anesthesia; waited considerable time for natural pains. Chloroform readministered and extraction begun; arms ascended about head; difficult delivery of same; occipito-posterior of vertex; rotation of the body, after some trouble and much caution, effected rotation of the head; very difficult extraction of the head; occiput rotated to the right, anterior; flexion was attempted by counter-pressure over the occiput and traction on the mouth and chin; child was stillborn. The placenta, adherent in a previous confinement, was easily delivered. Perhaps the smaller size of the child, it appearing to be two or three weeks premature, had something to do with this; douches in the lying-in period.

CASE V. *Right Occipito-posterior Position*.—August 30, 1897, called to assist Dr. Bumster. Difficult forceps; head rotating when low down; laceration of the perinaeum; repair; good recovery in mother; child born alive and vigorous.

CASE VI.—September 15, 1897, called to assist Dr. Bumster. Head engaged in the transverse diameter of the pelvis; fairly immovable; twelve hours in labor when forceps was easily applied. Considerable traction by colleague; less by the writer. Satisfactory evidence that child was living, and perhaps vigorous when the head rested on the perinaeum and forceps were removed. Face became very cyanotic (an evidence of its vitality). It was, perhaps, better judgment not to have expressed the head until involuntary pains were helped by voluntary ones, as the patient was rapidly becoming conscious; or perhaps there was too much delay in introducing fingers into the axilla and extracting the shoulders. Child was stillborn; bruised, ecchymosed spot slightly to the right of centre of the frontal bone corroborated the diagnosis of the position.

CASE VII.—November 12, 1897, called to assist Dr. Frey. Chloroform anesthesia; head grasped primarily almost antero-posteriorly, indicating a transverse position of the vertex. Scarification of nose and suboccipital region; slight abscess later in the latter region; rotation of the occiput on the pelvic floor; child born living; good recovery in mother; slight laceration and repair of perinaeum.

CASE VIII.—July 17, 1898, called to assist Dr. Bumster. Occipito-posterior position; head transverse at first; later, occiput to the left sacro-iliac synchondrosis; difficult forceps extraction, frequent unlocking of blades. Rotation of the blades and the head at the outlet; slight scar over occiput; upper lip swollen and slightly cut from forceps blade. Diagnosis correctly made and confirmed; child born living; no laceration; no reaction in mother.

CASE IX.—Called to assist Dr. McKeown. Seen by the writer with labor well advanced regarding dilatation of the cervix and firmness of pains. Head not engaged; thick, œdematous, strangled condition of the cervix, such as would be met with in a contracted pelvis. Dr. McKeown had experienced considerable difficulty in applying forceps, which, with the difficulty of handling the anæsthetic at the same time, became the occasion of my being sent for. It was fairly easy to recognize

that the occiput lay posteriorly, the very considerable difficulty of applying blades corroborating that point. After considerable traction, the infant was delivered with an expulsive shock. No rotation of head or blades occurred; completed as occipito-posterior direct, with considerable laceration of the perineum; repair of the same; a fairly large hematoma of the right side of babe's neck, slightly posterior to the ear; some excoriation of the same. A distinct flattening or indentation (an eighth of an inch) of infant's skull over the left anterior angle of the parietal bone. Paralysis of left side of the mouth and ptosis of left eyelid for an hour. Weak, cerebral cry of babe; incision of scalp and elevation of skull discussed; temporized; improvement in a few hours from intracranial pressure (e.g., as caused by crying, etc.). Flattening less distinct by the next day; child more vigorous; saw it again in a week; it was improved in every respect; advised by Dr. McKeown that the child progressed exceedingly well. Position: Occiput to the left sacro-iliac synchondrosis, chin to the right ileopectineal eminence; lateral flexion of the neck with its convexity to the right of mother. Considering everything, version would have been a much preferable procedure. Forceps delivery, I can not help but think, was fraught with much possibility of at least remote, if not immediate, danger; such a case would be one the like of which is spoken of as being a cerebral case, or one likely to develop meningitis later on in life. Deterrent points from performing version were the drained membranes and the pinched condition of the cervix, arguing, it appeared, for lack of room for skillful and, if need be, dexterous manipulation.

CASE X.—September 17, 1898. Faulty labor, due, in great measure, to the nervous apprehension of the mother. Inertia uteri; chloroform; forceps; easy extraction; good rotation; protracted anesthesia; slight excoriation over right eye of babe, followed by swelling of the same; very transitory; no untoward results; mother made a perfectly good recovery.

CASE XI.—October 19, 1898. Caput succedaneum to the right of the occiput, forceps blade lying over the left eye, temporarily marking and swelling the same. The head was oblique to the pelvis; a deep perineal rent; slight adherence of the placenta; a most difficult and slow extraction of the shoulders; babe was quite cyanotic; it was vigorous, however, and quickly restored.

CASE XII.—January 10, 1899, assisted by Dr. Bumster. Called when labor was slightly advanced; found prolapse of cord, complicating a vertex presentation. Only a few inches of cord had prolapsed, and one was able without exceeding difficulty, to carry it up above and behind the head during the pains until slight advance of head in the pelvis shut it off and away from the examining finger. Progress being very slow (all the more particularly since the mother had previously had several rapid, easy deliveries), anesthesia and forceps were decided upon, not before, however, vertex had well settled into inferior strait. Rotation of head and blades occurred when the former reached perineal floor. External rotation of the head (face to the pubes) corroborated position and brought shoulders into the transverse diameter of the pelvis. Cord was felt for and found encircling the neck; it was passed over head. Anesthesia had been suspended in the hope that Nature might help to initiate where art often but poorly stimulates the mechanism of shoulder delivery. Mother's efforts proven practically unavailing, we were confronted with one of the most difficult manual extractions of shoulder in our ex-

perience. A conservative estimate agreed in by both of us would set the shoulder extraction at fifteen minutes of unremitting effort; all hope of saving the child had long ago been abandoned when the child was born. Vigorous efforts at resuscitation were soon rewarded by an infant's gasp, replaced later by several hours of feeble moaning, the latter giving way in turn to the lusty cry of a vigorous babe; the child weighed twelve pounds and a half. Repaired perineum; mother's recovery uneventful.

I am alive to the likelihood of a harsh criticism upon the conduct of these cases; I am sensible of the disposition you all feel to have possibly done otherwise; I am aware that I might be given credit for better judgment and skill in having done version in many of these cases; I am satisfied that it is probably the teaching of the best minds; and yet, for all that, possibly because of a good fortune attending my efforts, I am almost ready to stand on this record. I have felt that, now for one reason and again for another, insurmountable contraindications to version presented themselves. I may be considered heretical in saying so, but I will express an emphatic doubt as to whether, after all, better results would have attended the child and the mother in the pursuit of different methods. Take, for instance, a case presenting occipito-posteriorly and perform a version: Have we any assurance, after such tax on a child's vitality (and it is in certain cases at least a tax), that, despite the trouble one commonly meets with in the management of the shoulders, an occipito-posterior position of the after-coming head might not be encountered? You will recall, perhaps, that one of these cases presented by the breech originally, and, if the breech extraction were not faulty, how comes it that we had an insurmountable difficulty to successful delivery in the management of the shoulders and head? For one should remember that in an occipito-posterior the abdomen of the child lies in apposition to the mother's abdomen, and that version must be accompanied by such a rotation of the child's body as to engage the after-coming head in an occipito-anterior position in the pelvis. Can this always be trusted to an easy accomplishment, and is it not an element in the advisability or otherwise of what to do under certain given conditions? And, again, for instance, in a shoulder case with prolapse of the cord, to which I shall have no more time than this to refer, though a version was rapidly and dexterously accomplished by Dr. Bumster, it is only fair to say, in a supposedly weakly child, from the history of the case, with the same failure of the child's head to rotate there was a grewsome termination of an otherwise possibly fortunate case.

As to diagnosis of faulty vertex positions, I shall mention just a few which occur from a mental rehearsal of practical incidents and not promulgated as a studied research of the subject:

1. Fontanelle and suture, digital examination.
2. Show progress in the presence of good labor pains.

3. Asymmetrical engagement of the head in relation to the sides of the pelvis—*e. g.*, an evidence that one blade of the forceps might be much more easily introduced than the other.

4. Failure of the forceps to lock.

5. Tendency of the forceps to slip.

6. Rotation of the blades.

7. Corroborative sign (position of the caput succedaneum).

8. Corroborative sign (face markings caused by the forceps).

As to the diagnosis of a living child in transit:

1. Integrity and seeming fullness of the skull cavity as compared with much overlapping and laxity of the same.

2. Cyanosis of the face.

3. Crying of the babe.

4. Fœtal heart.

In breech cases: 1. Response to peripheral stimuli.

2. Seat of the fetal heart sound higher.

In prolapse of the cord: Pulsation.

As to manœuvres in shoulder extraction:

1. Disengage an encircling cord, if existing.

2. Caution as to fracturing a limb.

3. Overcome or reverse an extreme rotation, that the shoulders may be brought antero-posteriorly.

4. Sometimes advisable to try the anterior shoulder first.

5. Correctly gauge the chloroform anæsthesia so as to gain the help of voluntary pains.

6. Use of the fillet or blunt hook.

7. Sweep the arm in the plane of a natural movement.

8. Judge the necessity of hurry.

As to puerperal malaria:

It is altogether possible that obstetricians of note have not found it either profitable or mandatory to reside in malarial districts, and this may be a reason why malarial fever as a complication of the puerperal state has not been enlarged upon in treatises on obstetrics. While far from claiming a rating with authors, permit me to say that I feel I have recognized it as a very common complication—so common, in fact, that I scarcely ever fail to give quinine in the lying-in period where a history of malaria, recent or remote, can be elicited. Its administration serves the double purpose of insuring a quiet, uneventful puerperium (other conditions being equal) and granting one a freedom from the recognition and observance of chills, fever, and associated conditions which at other times excite no apprehension, but, occurring in the convalescence from childbirth, may be fraught with direful forebodings, and instigate a fear that something might be amiss in the genital tract. And in this connection I beg leave to quote from notes in at least two remarkable cases:

CASE I.—Mother suffered from a severe chill about an hour before delivery; child, though born in normal

labor, appeared listless, dull, and irresponsive to stimuli. The inference seemed clear that the child was suffering from malarial fever, developed in utero. The mother was immediately treated with quinine. Good results to mother and child, periodicity of symptoms being noted. The mother had had no evidence of malarial intoxication since her previous confinement, two years prior to the present one.

CASE II.—After the third day of infant life, the child, previously noisy enough, became very dull and inordinately sleepy, awaking only at very infrequent intervals to nurse. The mother had been encouraged from the outset to take quinine, but she failed to do so. The stupor and sleepiness increasing during a period of four to five days, the nursing was suspended; quinine was given the mother, and oleate of quinine used on the child; good and prompt results.

I long ago reached the limit of a paper such as this, and I shall abruptly close with an expression of my sincere thanks for your kind attention.

THE OCCURRENCE OF THE STREPTOCOCCUS SCARLATINÆ (SO CALLED) IN CULTURES FROM THE THROATS IN CASES OF SCARLET FEVER.

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IN 1887 Klein isolated from the blood of cases of scarlet fever a streptococcus presenting certain cultural peculiarities, which streptococcus he believed to be causally related to the disease. In bouillon it formed a cloudy, flocculent white sediment at the bottom of the culture tube, leaving the remainder of the bouillon perfectly clear and limpid; and it caused rapid coagulation of milk. This organism was also isolated from the ulcerations on the udders of cows whose milk had been proved to have disseminated scarlet fever.

In 1890 Kurth* described a streptococcus similar to the one described by Klein, which he found in the throats of scarlet-fever patients, and which he called the *Streptococcus conglomeratus*. In bouillon cultures it showed a cloudy deposit in the otherwise clear serum. Stained microscopical specimens of this deposit showed it to be made up of a conglomerate, closely woven mass of streptococci. He also states that this organism, in contradistinction to all other known streptococci, was extremely pathogenic to white mice.

Klein† confirms these observations of Kurth's in a report on eleven cases of scarlet fever, from which he isolated the above-described streptococcus. He calls attention again to its power of coagulating milk, and

* Kaiserl. Gesundheitsamt, announced at Tenth International Congress in Berlin, 1890.

† Twenty-seventh Annual Report of the Local Government Board, London, Supplement, 1898, p. 326.

Scarlet Fever.

DATE.	No.	How made.	Result of incubation.	Sediment.	Microscopical examination.
January 19th.....	1	Peptone-bouillon culture from serum tube.	General cloudiness of bouillon in twenty-four hours.	Slight amorphous.	Staphylococci and large bacilli.
January 19th.....	2	Peptone-bouillon culture from serum tube.	As above.	None.	Staphylococci. Few streptococci.
January 21st.....	3	Peptone-bouillon culture from serum tube.	As above.	None.	Staphylococci.
January 21st.....	4	Peptone-bouillon culture from serum tube.	As above.	As in No. 1.	Staphylococci and bacilli.
January 25th.....	5	Peptone-bouillon culture from Petri dish. Round, translucent colonies. Made at W. P. Hoop; edges sharp; elevated.	Cloudiness at end of twenty-four hours in two tubes. Slight filmy deposit.	.....	Contact smear showed few short chains. Smear from bouillon showed moderate number of streptococci.
January 25th.....	6	Made as in No. 5. Colonies as in No. 5. Also irregular colonies shading off into media.	Cloudiness at end of twenty-four hours in four tubes from both kinds of colonies.	Amorphous deposit.	Smear from diffuse colonies showed diptheria bacilli. From tube, only staphylococci.
January 25th.....	7	Made as in No. 5. Colonies as in No. 5.	Cloudiness at end of twenty-four hours in three tubes. Further incubation increased cloudiness.	Filmy deposit.	Smear from filmy deposit showed only staphylococci.
January 25th.....	8	Made as in No. 5. Colonies as in No. 5.	Slight cloudiness at end of twenty-four hours, increasing at end of forty-eight hours.	Flocculent deposit.	Smear from plate showed moderate number of staphylococci. Smear from tube showed many large streptococci.
January 27th.....	9	Made as in No. 5. Colonies as in No. 5.	Marked cloudiness at end of twenty-four hours.	Film above and at bottom.	Smear from film showed many staphylococci; no chains.
January 27th.....	10	Made as in No. 5. Large, translucent, round, elevated colonies; whitish.	Slight but distinct cloudiness at end of twenty-four hours. No change at end of forty-eight hours.	Granular sediment.	Smear from sediment: No chains; cocci.
January 27th.....	11	Made as in No. 5. Small, yellowish, opaque colonies.	Bouillon absolutely clear and limpid at end of twenty-four hours; also forty-eight hours.	Flocculent white deposit.	Smear from deposit: Composed entirely of staphylococci; not a single chain observed.
January 27th.....	12	Made as in No. 5. Colonies as in No. 10.	Slight cloudiness at end of twenty-four hours; increased at the end of forty-eight hours.	None.	Smear from plate showed pure culture of streptococci.
January 27th.....	13	Made as in No. 5. Colonies as in No. 11.	Marked cloudiness at end of twenty-four hours, diminishing markedly on further incubation.	None.	Almost a pure culture of streptococci (from tube).
January 27th.....	14	Made as in No. 5. Colonies as in No. 5.	Slight cloudiness in twenty-four hours, increasing in forty-eight.	Filmy deposit.	Small bacilli, cocci, and a few short chains (from tube).
November 8th.....	15	Frank Stevens, ill twenty-four days; temperature, 100.2°. W. P. H. Culture made by Dr. Park on November 6th. Incubated from 6 p. m., November 6th, to 9 a. m., November 8th. Oval, semitranslucent, sharply defined colonies, mostly whitish. A few yellowish, but not golden.	Three bouillon cultures made 9 a. m., November 8th: (a) Cloudy; granular deposit..... (b) Cloudy in twenty-four hours..... (c) Cloudy in twenty-four hours.....	Granular. Granular. Granular.	Staphylococci and bacilli. Streptococci and staphylococci. Staphylococci.
November 8th.....	16	Mary Fav, six days ill; temperature, 100.2°. Culture made as No. 15. Large and small circular, whitish colonies. Also some golden yellow colonies. Medium sized colonies have spot in centre and thin out to edge; also a few very large colonies. Three days' incubation failed to show the brownish spotted colonies described.	Five bouillon cultures, 9 a. m., November 8th: (a) Very cloudy (aureus), twenty-four hours..... (b) Cloudy, twenty-four hours..... (c) Cloudy, twenty-four hours..... (d) Clear, limpid, twenty-four hours..... (e) Clear, limpid, twenty-four hours.....	None. White, flocculent. None. White, flocculent. White, flocculent.	Staphylococci. Streptococci and bacilli. Large bacilli. Streptococci, short and long chains, milk coagulated. Streptococci, short and long chains, milk coagulated.
November 8th.....	17	Elsie Stevens, four days sick; temperature, 103.2°. Culture made as No. 15. Only four round, whitish colonies, opaque, no spot in centre.	Three bouillon cultures made 9 a. m., November 8th: 1. No growth, forty-eight hours..... 2. Cloudy, twenty-four hours..... 3. Cloudy, twenty-four hours.....	..... ..... Granular. None.	None. Staphylococci and streptococci.

also to the characteristic brownish spotted appearance of the colonies growing on agar-agar.

Cultures from the throats in seventeen cases of scarlet fever have been examined at the diagnosis laboratory of New York City Department of Health. Of these, four were cultures on serum-agar tubes made by inspectors of the bureau of contagious diseases, stated that the cases were undoubtedly scarlet fever. The remaining thirteen cases were seen at the Willard Parker Hospital, where they had been admitted as scarlet fever and the diagnosis confirmed. The cultures were made by Dr. William H. Park, in accordance with the directions given by Klein in his second article.

In every case at least three, and sometimes more, bouillon cultures were made from the agar plates, such colonies being selected as resembled those described by Klein in his second article. These bouillon cultures were incubated from twenty-four to forty-eight hours. Smears were made from the deposits in the tubes, and in one or two instances direct contact smears were made from the plates. In about fifty per cent. of the cultures colonies were observed which presented a spotted appearance as described by Klein. As shown by the preceding table, the results were practically negative. In only one instance was a streptococcus corresponding in cultural characteristics to the *Streptococcus scarlatinae* isolated (see table, No. 16). So that while the so-called *Streptococcus scarlatinae* or *conglomeratus* does occur in the throats in some cases of scarlet fever, it is either not constantly present or, in the great majority of cases, is isolated with great difficulty. The question as to whether its presence is diagnostic of scarlet fever has not been considered here, but it is very doubtful. Its absence in cultures from the throat in a case of suspected scarlet fever in no way negatives the diagnosis. It is possible that the wide variation between these observations and those of Klein and Kurth may be due to differences in the disease itself as occurring in this country and abroad.

32 EAST FIFTY-THIRD STREET.

A CASE OF ACUTE TRANSITORY MANIA OCCURRING IN A SYPHILITIC MORE THAN THREE YEARS AFTER APPARENT CURE OF THE SYPHILIS.

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On January 5, 1899, I saw P. D., white, aged twenty-five years, of Irish birth; married. He worked as a track hand on the railroad and had been always well and strong until this illness. About a week before I saw him, while walking along the street in company with several other men, and in apparently perfect health, he fell, suddenly and without warning, in a fit, which was evidently epileptoid, from the graphic description of several of the men who were with him. He

lay unconscious for about ten minutes, and was then able to walk to his home, in a dazed condition, with the assistance of a man on either side of him. He had no recollection of the attack beyond what he learned from hearsay, and could not understand why his friends made such a fuss about it. He was not a heavy drinker, although he would occasionally take a few glasses of beer, and he had had a little before the fit came on. He had been seen by a competent physician, who had treated it as the result of more drink than was acknowledged. He had no more attacks until the night before I saw him, when he had one, which caused his wife great alarm, and led her to arouse his brother, who lived near. He had had several friends at his house before going to bed and there had been some drinking, but he had taken very little, according to the testimony of those who had been present. When I saw him he seemed perfectly well, although his family insisted that he was very different from his usual self; but, being rather ignorant people, they could not exactly define the difference. His lungs and heart were normal, his pulse rate was not hurried, and the arterial tension was low. His stomach, bowels, and kidneys appeared to perform their functions correctly. His speech was perfect, his eyes looked natural, he complained of nothing except considerable loss of muscular power, a weakness that he was not accustomed to, but which was readily accounted for by the violence of the fit. He was perfectly sane and rational on every point, but he had no recollection of anything that had happened in the night. There was no elevation of temperature when I saw him. He was given a solution of bromide of sodium, with compound tincture of cinchona, to be taken three times a day, each dose containing twenty grains of the bromide. Everything went well until the early hours of January 10th, when, at about three o'clock, he had another severe attack, which lasted several hours, rather as a succession of epileptoid convulsions than as a continuous seizure. He had been perfectly well the night before, and no cause could be assigned for the seizure. He had taken the medicine regularly; he had eaten and slept well; he had had no headache or other symptom that could lead one to anticipate a return of the trouble. By 10 A. M. he was entirely over the attack, but remained quite weak, equally so on both sides, and had a heavy, dazed appearance about the eyes, although nothing in the eyes denoted any change from normal. He was rather angry that any extra notice should be taken of him than worried about his condition. His bowels and kidneys were acting well. The urine was acid, 1.026 specific gravity, and contained neither sugar nor albumin. He answered all questions correctly, but otherwise was moody and inclined to be morose. Several times during the day he had loss of consciousness for a minute or more, sitting or lying with eyes open but staring in a fixed direction, without any convulsive movement whatever. His appetite was unchanged, and all other functions appeared to be normal. During the following night he was again much worse, becoming delirious and very excited without any appearance of fever, as far as his family could judge. Though milder during the next day, he was evidently worse, both in mind and body. Further questioning showed that he had served for several years in the British army in India, from which he had returned about a year previously. There being nothing else evident to account for his anomalous condition, he was suspected of syphilis on general principles, although his answers to questions on the subject were very vague and contradic-

tory, so he was ordered large doses of iodide of potassium, beginning with ten grains three times a day, to be increased five grains each day, and mercurial inunction with twenty grains of blue ointment was to be given every second night. Before any effect could be expected from this treatment he grew much worse, becoming more and more wildly delirious, so that he had to be restrained forcibly, and was finally tied in bed to keep him from jumping out of the window, or otherwise injuring himself. He had no more epileptoid attacks, but his mind was completely wrecked, with no lucid intervals, and only short periods of sleep, without succeeding benefit. Removal to an asylum was urged unsuccessfully until the morning of the 15th, his family consenting only when it was evident that he was entirely beyond their control. After the first week in the asylum he began to improve, and rapidly regained consciousness, so that he was returned to his home at the end of a month. He was perfectly himself again, but still quite weak muscularly, as was to have been expected, and he had lost about twenty pounds in weight. Of his illness he could recall nothing until he regained consciousness during his second week in the asylum. Being asked after his return home about his life in the army in India, he admitted having had a hard chancre some three or four years previously, for which he was kept under treatment for more than a year at varying intervals. His description made it perfectly evident that he had had syphilis at that time and confirmed the tentative diagnosis made from the symptoms and strengthened by the result of the treatment. The man is still (March 15th) under observation and shows no deviation from ordinary health. His treatment now consists of a mercurial inunction twice a week with about thirty grains of blue ointment.

Probably the most interesting feature in the case related is the suddenness with which an apparently healthy man was completely overwhelmed by the syphilitic explosion. So far as I could discover, there existed no exciting cause whatever to account for the attack. He had had his primary sore about four years previously, for which he had had thorough and systematic treatment from physicians presumably capable. He had had no further manifestations of any kind, and naturally considered himself perfectly well. He attended to his work, which was quite heavy, without difficulty. He was married to a wife who showed no signs of infection. Though his nervous system appeared easily excitable, yet it was no more than one usually expects to find in any young Irishman of his age. The diagnosis lay between true epilepsy and syphilis of the central nervous system, the nocturnal occurrence of the paroxysms favoring either view; but the rapidity with which he went from bad to worse, and the development of maniacal symptoms so promptly, in spite of large doses of bromide, favored the diagnosis of syphilis. The discovery of his former life in the Indian army added to this probability, but the man's answers on the point of primary infection were most unsatisfactory at the time of his illness, although perfectly explicit after his return from the asylum. He had no disfiguring marks or cicatrices on any part of his body to aid in

diagnosis, nor was his hair in any way lessened. The mania was extremely violent, coupled with wild hallucinations, and was always worse at night. During the day his state was rather that of dementia, with constant suspicious watchfulness, as if fearing some injury from the members of his family. His improvement after removal to the asylum was rapid and continuous, but whether from the change of surroundings and better nursing, or from the antisymphilitic treatment, I am not prepared to say. How long it may be before he has further manifestations, and in what form they will appear, are interesting questions to be answered later.

DIPHTHERIA: THE SERUM TREATMENT IN GENERAL PRACTICE.*

By PALMER HEATH LYON, M.D.

THERE have appeared from time to time various articles which, if they do not altogether condemn, disparage the use of antitoxine in the treatment of true diphtheria.

The writer has been fortunate enough to see a number of cases in which he has felt positive that had not antitoxine been used nothing could have saved the patients. These patients received the serum and all recovered. Upon such evidence as this I have ventured to present a few arguments and observations which, while not new, seem to have a definite bearing upon the subject.

In the first place, I wish it to be distinctly understood that I am in thorough accord with those who maintain that the curative value is greatly diminished if the treatment is not begun in the first three days. After that it is almost useless to undertake to administer the serum—the time has passed. However, it is my firm belief that up to that time, in every case in which it is not absolutely contraindicated, it should be tried. While it will probably be of no avail, it should be tried even after that period is past, and it should not be done in a hasty or cursory manner, when other means have been fairly tried and failure has resulted. The general consideration of this subject naturally divides itself into three main channels: *When, where, and how* to administer the antitoxine.

Along the first of these groups our introductory remarks have carried us, and we will pass on, simply remarking that the earlier the remedy is used the better the results. The first day is, therefore, the best time, but very excellent results have been obtained in cases in which the inoculation did not take place until the second or third day.

The second division admits of little discussion. It is only natural that a site of operation should be selected

* Read before the Washington Health Medical Society, March 30, 1899.

that will provide ready absorption, inasmuch as on this depends much of the success of the treatment. For this reason there are two portions of the body admirably adapted. They are the surface of the abdomen in the lumbar region (either left or right; personally I prefer the left), or the external surface of the thigh. Of these, the former is, when practicable, the better. In the case of very small children, however, the latter mode presents fewer obstacles; therefore it is advocated when the other and favorite method can not be adopted.

Since this paper was started there have appeared several articles by distinguished writers upon the subject of oral administration of antitoxine. A serum may be produced in the future which will be suited to such a method, but certain it is that at the present day the hypodermic method is the one for which the various serums are prepared, and, until we have some better reason to discard it than we have at present, it is the one for us to retain. We have reduced the necessary quantity to a minimum by increasing the potential of the serum. Were we to use it *per os*, a much larger quantity would certainly be required.

But this in passing.

The next channel along which we direct our investigation is that of how to administer the antitoxine, and this I propose to divide into three portions—viz.: 1. The method of administration. 2. The amount to use. 3. General considerations. We will proceed in the order mentioned.

1. *Method*.—The very first consideration is invariably absolute asepsis. Instruments, receptacles, dressings—in fact, everything used—must be absolutely sterile. The skin of the patient must be washed with some efficient disinfecting solution. For this purpose I prefer a solution of lysol of a strength of four per cent. After this in several cases I found it advisable to produce local anaesthesia by means of either the ether or ethyl chloride spray. It is conjectural, however, whether this is really advisable with small children, as the cold and discomfort of such a procedure, to my mind, are greater than when the needle is carefully and quickly introduced. Still, in adults and older children it is often of much use.

With regard to the instrument or means of inoculation, any good antitoxine syringe will answer. There are many now on the market, all of which have their good points. I must speak here of a modification which might well be omitted. This is the use of a rubber tube between the syringe and the needle. After trying both with and without this, I have discarded it. It is a relic of the old rubber bulb syringe. The operation is rendered much easier by using the needle fast to the barrel. It is less painful to the patient, and the physician completes the inoculation without further difficulty. If an antitoxine syringe is not at hand, a large hypodermic one will answer, if a serum of a high potential is used.

If possible, the serum should be taken directly from

the containing flask, thus avoiding the risk of contamination. If, however, it becomes necessary to transfer the serum, great care must be taken that the new receptacle is sterile.

The operation complete, a sterile compress should be held on the puncture for a few seconds and then colloidion applied. It is not advisable to employ massage, as absorption takes place rapidly in these regions. The patient should be kept quiet for a short time immediately after the operation is completed.

Individuals who have been exposed may be immunized in the same manner, a smaller dose of the serum being used.

Before proceeding to a consideration of the subject of amount to be used, I wish most strongly to advocate the immunization of every person who may have run even any risk of infection. The cases I shall quote in a few minutes will emphasize this point, but it is my firm belief that with such precautionary measures our present low death-rate may be greatly decreased.

2. *Amount*.—The New York board of health has determined that the average curative dose is fifteen hundred units (Behring's). I have found that in the majority of cases this held good, but it is unwise to try to set any one fixed rule to cover all cases.

If (ten to twelve hours having elapsed since the original dose) there is not a decided improvement, a second dose of from two thousand to twenty-five hundred units should be given. It may even become necessary to give a third one of from three thousand to four thousand units. It is seldom that a third dose is needed when the treatment is begun on the first or second day of the disease. When treatment is delayed, however, it is sometimes necessary to give a third or even a fourth dose.

For immunization a dose of from five hundred to a thousand units is all that is necessary. The dose here is proportionate to the individual's age and strength, also to the general physical condition. I would remark that I have never seen a patient, properly immunized with these amounts, become infected. It is unfortunate, however, that this immunity is not lasting, but passes away after a period of from five to eight weeks.

3. *General Considerations and Deductions*.—Before considering this topic, I desire to refer to several cases which will serve the better to illustrate the foregoing.

CASE I.—S. C., a woman, aged twenty years. On December 13, 1898, she complained of a slight sore throat. She had been suffering from a heavy cold, but there were no symptoms pointing to diphtheria. On the next day, by means of the electric diagnostic appliance, I was enabled to get a view of the throat, which resulted in making a culture that, on the following day, showed the presence of *Bacillus diphtheriae*. The patient refused treatment by antitoxine, and, as isolation of the case was impossible, she was removed on the 16th to the Willard Parker Hospital, where she received twenty-five hundred units and made a good recovery.

In the family which she served as a domestic there

were three adults and two small children. Each of these persons received a thousand units of board-of-health antitoxine, and, although they had been constantly exposed, not one was afterward infected.

CASE II.—R. R., aged three years, and A. R., aged five years. These two children, together with others, were a most interesting group of cases which I saw through the courtesy of Dr. L. A. Rodenstein. R. was undoubtedly suffering from diphtheria. A., while showing no throat symptoms, still seemed suspicious. The sick one was given fifteen hundred units, and the others a thousand each. R. was sitting up in bed in four days, and there was no further complaint from the others. A. was perfectly well the next time I saw him.

CASE III.—Mrs. R., mother of the two children mentioned above, refused inoculation when she began to nurse her son. Three days after she was attacked by the disease in a very violent form. She received two thousand units, and twelve hours later three thousand more. In three days she was much better, and in a week she sat up for a short time.

CASE IV.—A. T., a boy, aged eleven years. A very severe case. On March 1st he awoke with a sore throat. When I saw him that afternoon the membrane covered both tonsils and the posterior pharyngeal wall. It was evidently the third day of the disease. I at once gave the child fifteen hundred units, and isolated him with his mother, to whom I gave a thousand units. He rallied slightly with this, but his temperature remained high (104.5° F.). In the morning I deemed a second dose necessary, so I gave him two thousand units. A slight drop in the temperature occurred, but it rose again during the next day, and at midnight it reached 105° F. His condition was very poor, and I felt but little hope. A third dose of three thousand units was administered, and in two hours the temperature began to fall. Before the change took place Dr. Rodenstein was called in consultation, and we agreed that the case was almost hopeless. The depression was extreme, and constant stimulation was resorted to in the hope of tiding over the crisis and giving the last dose of antitoxine a chance to work. As stated, the temperature fell, and in forty-eight hours had reached almost normal. The remainder of the recovery was ordinary. We were convinced, however, that the child had practically been snatched from the jaws of death, and to antitoxine we give all credit for the recovery.

CASE V.—E. T., aged thirty-seven years, the father of the foregoing patient, was obliged to attend to some trifling duty in the sick-room, and in three days he showed the disease. He was at once isolated and given fifteen hundred units. As he had been constantly with the rest of his family, consisting of four children, they were all immunized, with the result that none contracted the disease. He himself needed but the one inoculation, and made a speedy recovery.

Other cases might be cited, but I feel sure that the foregoing are sufficient to illustrate the matters referred to, and from which I feel that the following conclusions may justly be drawn:

1. Antitoxine, to be efficacious, should be administered early, the first three days being the reasonable time to expect good results.

2. The greater the time which elapses before the first dose, the poorer the patient's chance of recovery.

3. When immunized persons and those not so treated

are exposed to the same chances of contagion, the immunized escape, and those not so treated "take" the disease. We may, therefore, conclude that all exposed individuals should be at once immunized.

4. As severe cases which, ordinarily treated, terminate fatally, yield readily to this treatment, it is certainly to be regarded as good routine treatment, and, as the early treatment is the secret of success, the serum should be employed in all cases in which diphtheria is even suspected, even before the bacteriological diagnosis is complete, it being perfectly harmless if properly administered. By this I mean that the serum should be of standard preparation and not over six months old, and that perfect asepsis is the rule.

5. The only unpleasant effect is that sometimes a slight urticaria is observed about the site of inoculation (occasionally becoming general). This gradually passes away in the course of a few days, and is of trivial importance.

In conclusion, let me call attention to the fact that while the disease is usually quickly terminated by this most valuable remedy, unfortunately after-effects may follow, as is so often the case with other and far less successful treatments. I am glad to say that in the cases cited such has not been the history.

ANTINOSINE IN THE TREATMENT OF ENURESIS, CYSTITIS, AND URETHRITIS.

By R. E. AMYX, M.D.

ST. LOUIS,
SENIOR ASSISTANT PHYSICIAN TO THE ST. LOUIS CITY HOSPITAL.

In presenting the following cases, I desire to place before the medical profession a full and detailed account of the treatment which was employed. Not that I believe it to be a treatment which will in every case give results superior to many of the other known remedies used in the treatment of cystitis and enuresis, but because of its value in the cases I have to present to you, and of its good effects in cases which did not respond to other well-known remedies. The use of antinosine was purely experimental in the cases selected, but the good result obtained in the few cases in which it was used will give it a place among the best-known agents employed in cystitis and enuresis.

The following are the cases that I present:

CASE I.—Frank E., aged twenty-eight; native of Germany; occupation, laborer. Habits: Smokes tobacco moderately, drinks whiskey and beer to excess, uses no narcotics, indulges excessively in venery.

Family History.—Mother died of typhoid fever; one sister died of some affection of the lungs, the nature of which was unknown to the patient; other members of the family are alive and well. No facts history in the family.

Previous History.—Does not recall what diseases he had during childhood, except such of the disorders of the digestive, respiratory, circulatory, or nervous

system; had malaria several times, gonorrhœa several times, syphilis seven years ago, but denies having had secondaries.

Present History.—Patient entered the hospital intoxicated, having been drunk for several weeks. After having recovered from the effects of his indulgence in whisky, he complained of pain during urination and of frequent micturition, having to pass his urine from ten to fifteen times during the twenty-four hours; at times it was almost impossible for him to pass his urine, while at others he was unable to hold it. This latter condition was due to the existence of an old urethritis which had troubled him for the past three years. The patient states that he had been troubled several times with enuresis. Urinalysis: This showed the urine to be very light straw color, alkaline in reaction, ammoniacal odor; specific gravity, 1.024; slight trace of albumin, pus cells, and triple phosphates present; no sugar, bile, acetone, or indican present; no cast was found. After the patient had been in the hospital two weeks his enuresis became very annoying, owing to his urine passing involuntarily during his sleep, while the existing cystitis which he had gave no signs of improvement. During this time patient's bladder was irrigated with a one-fourth-per-cent. nitrate-of-silver solution without any marked improvement. In the meantime a No. 30 sound (cold) was passed every day in order to relieve the existing enuresis; this latter procedure had to be dispensed with, as it aggravated the cystitis. In addition to the local treatment, strychnine, belladonna, iron, and salol were administered internally. At the end of three weeks it was deemed necessary to seek some other local treatment than the nitrate-of-silver solution, and a 1-to-4,000 permanganate-of-potassium solution was employed with some effect on the cystitis. The enuresis, however, continued without any apparent relief. Having exhausted the best-known remedies for these conditions without any marked improvement, a two-per-cent. solution of antinosine was employed in order to diminish the amount of pus present in the bladder. (The antinosine solution had been used externally for cleansing several wounds in which there had been a large amount of pus. In these instances pus had disappeared under its administration, so it was deemed advisable to try it in this instance for the same purpose.) The patient received an irrigation of this solution daily for a period of two weeks. During the first week there was no manifest improvement, so far as the appearance of the urine was concerned—that is, the urine on each following day did not show any diminution in the amount of pus; patient, however, stated that he did not suffer as much pain, and that he could hold his urine better than he had been able to previous to using the antinosine solution. Encouraged by the improvement in the patient's subjective symptoms, he was kept on the irrigations. During the third week of the latter treatment it was observed that his urine seemed less cloudy and thick; this became more apparent at the end of a month's treatment, and at the end of six weeks treatment was suspended, the urine having become clear in color, normal in reaction, no triple phosphates present, and, in addition, the patient was able to control the passage of his urine. At this period the patient seemed entirely well of both cystitis and enuresis. Two weeks after discontinuing the irrigations the patient stated that the enuresis had returned, but not in an aggravated form, as only a few drops of urine passed at a time. He was again put on an antinosine irrigation; in this instance

it was thought best to irrigate only the urethra, as there was no indication, from repeated urinalysis, of the presence of any cystitis. An anterior urethral irrigation was used; this seemed to produce a slight irritation of the urethra at first. The pain was not severe, however, so there was no reduction made in the strength of the solution used. This treatment was continued for two weeks, the patient receiving an irrigation morning and evening. After the fifth day of the treatment incontinence of urine disappeared, but it was thought best to continue the irrigations until the inflammation of the urethra had disappeared. We judged that time to be when the solution did not irritate the urethra. At the end of two weeks the patient stated that he could hold his urine as well as ever, and he did not pass any urine during sleep—in fact, there was complete disappearance of all signs of enuresis.

This case will serve to illustrate the value of antinosine, not only for its immediate relief, but especially its ability to permanently relieve such conditions. It is now four months since the patient used any irrigation, and up to the present time he has not been annoyed in any way by his former condition—namely, cystitis or enuresis.

CASE II.—Charles M., aged thirty-five; native of New York; occupation, laborer; family history good. Habits: Does not drink alcoholic liquors to any excess; uses tobacco moderately; other habits fairly good.

Previous History.—Had the usual diseases of childhood; malaria several times; denies having had syphilis; states that he has had gonorrhœa several times.

Present History.—Patient admitted to hospital suffering with retention of urine. Examination of the urethra revealed organized strictures in the membranous urethra, a filiform sound being the only size which could be passed into the bladder. The patient was recommended for external urethrotomy. The operation was performed three days after entering the hospital. Two days after the operation the patient developed cystitis; this condition resulted from a drainage tube in the perineal section. For the cystitis a two-per-cent. solution of antinosine was used, the bladder being irrigated every day for twelve days. After the twelfth day irrigation was discontinued, the cystitis having disappeared.

CASE III.—In this instance no permanent benefit was obtained, as the condition which produced the existing cystitis was beyond medical or surgical interference, but in producing a temporary change, so far as the reduction of the pus in the bladder was concerned, antinosine solution had a very desirable effect, so I will submit this case purely upon experimental grounds: Richard F., aged sixty-four; colored; native of Missouri; occupation, laborer; no definite family or previous history obtainable.

Present History.—The patient complains of painful and frequent urination, having to pass his urine from fifteen to twenty times daily. Examination of the urethra reveals organized stricture in the anterior and membranous urethra, a small metal catheter being necessary to draw urine from the bladder. Examination of the rectum reveals enlargement of the prostate gland; in addition, urinalysis revealed a chronic interstitial nephritis. Urinalysis: Twenty-four hours' amount, twenty-six hundred cubic centimetres; cloudy;

reaction alkaline; specific gravity, 1.010; trace of albumin present. To obtain urine for examination for the presence of casts, the bladder was thoroughly irrigated, and two hours later urine was obtained by catheter; the specimens showed a few hyaline casts, no sugar, indican, or bile being present. In this case antinosine solution was merely used for the purpose of ascertaining its value of reducing pus in the bladder when it was associated with complications, such as a nephritis, without hope of permanently relieving the cystitis present, as the existing complications made that an impossibility. We began irrigating the bladder with a two-per-cent. antinosine solution; this was continued for two weeks. During that time the urine did not show as large an amount of pus as it did previous to the employment of antinosine. At the end of the above-named time the irrigation was discontinued. A week afterward a uranalysis was made; the urine had become thick, ammoniacal in odor, and contained a larger amount of pus than it did during the time irrigation was employed.

The rapid and satisfactory results shown in these few cases have been duplicated in the experience of some of the internes in the City Hospital, and there can exist no doubt whatever of the value of this remedy in cystitis more particularly, especially when of a purulent character. An advantage possessed by antinosine, which is not shared by other remedies which are used for the same purpose, is that it is positively non-toxic. There need be no hesitation in its employment, and instead of irritating it is soothing. Patients remark upon this and are pleased to have the injections administered. Another great advantage possessed by antinosine is its rapidity of action. I have had occasion to observe this, and also the fact that, a cure being well-established, it becomes permanent. It seems to fulfill the ideal requirements of a remedy so well expressed in the old Latin motto, "*tuto, cito et jucunde.*"

A CASE OF RIGHT LATERAL DISPLACEMENT OF THE BLADDER WITH FÆCAL IMPACTION.*

REPORTED BY MAJOR L. C. CARR,

BRIEFING SURGEON OF VOLUNTEERS,
COMMANDING UNITED STATES GENERAL HOSPITAL, GUANTANAMO, CUBA.

PATIENT, a medical officer of the volunteer army, forty-four years old; born in Guernsey County, Ohio. Father living and in good health, aged seventy-eight years; mother died in 1890, when sixty-eight years old, of an abdominal tumor, probably a carcinoma; four brothers and one sister living and in good health. Married; has four healthy children. From infancy he noticed a varicose condition of the veins of the right leg. Had an attack of pneumonia when he was about nine years old; typhoid fever at the age of eleven years; measles at fourteen years, and another attack of pneumonia at fifteen years. When seventeen years old he contracted intermittent malarial fever; then enjoyed good health up to the age of twenty-three years, when

he was attacked by yellow fever at Memphis, Tennessee. After this he enjoyed good health until he was thirty-six years, when he suffered an attack of sciatica of the right side, of a very mild form, lasting only twenty-four hours. After this the patient had several slight paroxysms of malarial fever, which readily yielded to treatment. He came to Cuba in August, 1898, enjoying perfect health, and on September 10th had an attack of malarial intermittent fever lasting thirteen days. The fever recurred in October and persisted several days. Another attack occurred November 4th, this time assuming a remittent type and lasting four days. On November 9th he was ordered to proceed to the United States in charge of the sick on a government transport. During his stay in the United States his health was good. He returned to Cuba in fairly good condition December 31st. Previous to his departure from Cuba he had noticed a swelling in the right iliac fossa. This swelling recurred once during his stay in the States, and again on his return voyage to Cuba. He left Santiago at 10 p. m. January 3d, 1899, en route to Guantanamo. During the sea voyage the patient was chilled, owing to the fact that his underclothing was of light grade and totally insufficient to keep him warm. During the night he rested badly, having frequent calls for micturition; he also had a severe attack of sciatica the following day. About twenty-four hours after landing he made a trip to Jamaica, ten miles distant, on an ambulance over a very rough road while still suffering from the sciatica of the right side. During the trip he made an attempt to pass urine at Jamaica, but without success. Upon returning to Guantanamo late in the evening of January 5th he was still unable to empty his bladder. A swelling appeared in the right iliac fossa, which gradually increased in size until it reached the line of the umbilicus, giving rise to great pain. There had been no passage from the bowels from the time of leaving Santiago, and large doses of salts, castor oil, and croton oil failed to overcome the constipation, although a slight liquid stool followed the use of the croton oil. The swelling continued to increase, accompanied by constant dribbling of urine. The sciatica became more intense. Hypodermic injections of morphine and atropine were given and inhalations of chloroform were resorted to. His condition grew gradually worse up to the time of his reaching the United States Army General Hospital, Santiago de Cuba, January 10, 1899, to which hospital he was sent with a diagnosis of fecal impaction and obstruction, with the previous message by cable to make preparations for a laparotomy. Immediately upon his arrival the commanding officer, in company with the entire medical staff, held a consultation on his case. The patient's condition was then as follows:

He was in great agony; temperature, 100° F.; pulse, 90; respiration, 18. His expression was cheerful and revealed but little sign of the intense agony above referred to, nor did he show the slightest apprehension of impending danger, although he was fully cognizant of the diagnosis of fecal impaction and of the further fact that all preparations had been made for laparotomy. There was no vomiting or retching. He only complained of slight colic now and then. The abdomen was rather distended and tympanitic; it contained a very marked tumor occupying the right iliac fossa, rather hard on pressure, movable, flat on percussion, and showing decided fluctuation on palpation; no desire to urinate existed. There seemed to be a general willingness to accept the diagnosis—fecal impaction—to the exclusion

* Transmitted from the office of the surgeon-general of the army.

sion of other trouble, when attention was called to the dribbling of urine, and Acting Assistant Surgeon F. W. Fabricius suggested the passing of a catheter before coming to a definite conclusion.

Catheterism was performed with the result of drawing sixteen hundred cubic centimetres of urine; this was only part of the contents of the bladder. The tumor disappeared immediately, and disseminated hard masses of fecal matter could be discovered in its place, proving beyond doubt that the tumor had consisted in greater part of the overdistended bladder. The second indication to meet, then, was to overcome the constipation, which had lasted for six days, and large enemata were given with good results. The patient rested easily until about midnight, when the catheter was again passed, drawing off twelve hundred cubic centimetres of urine. After this the patient slept tolerably well during the rest of the night. His temperature next day had dropped to 99° F. It rose again to 101° F. in the evening. The patient was catheterized every four hours. On the morning of the 14th his temperature was 99° F., and rose again to 100° F. in the evening. He then complained of burning pain when using the catheter, and began to pass bloody urine mixed with pus. The region of the bladder was very painful on pressure, indicating that acute cystitis had supervened. An irrigation of the bladder with a four-per-cent. solution of boric acid was made morning and evening, and the patient placed on a milk diet. His temperature on the morning of the 15th was 102° F., rising to 103° F. in the evening. Phenacetine was given until his temperature was reduced to 101° F., continuing at the same time the irrigations. The cystitis was greatly relieved by next morning; there was no pain on urination; the urine was no longer sanguinolent, and only contained some mucus. The temperature of the patient dropped to 99° F., and on the evening of the same day it was 98° F. During all this period rectal injections were continued with more or less success. Sulphate of magnesia was also administered. The bowels continued to act, but not freely, and, as no danger was imminent, and hard fecal masses were coming away at intervals, showing that the bowels were regaining their tonicity, heroic measures were not deemed justifiable. After the evening of January 16th the patient's temperature remained normal. In the meantime the sciatica had attacked the other side and was now double, continuing its nightly exacerbations. Phenacetine and quinine sulphate, in doses of five grains of the former and seven grains of the latter three times daily, were then prescribed and continued for several days, accompanied by daily applications of electricity.

From the periodicity of these attacks of sciatica, malarial infection was suspected. Several microscopical examinations of the blood were made. These examinations were negative, and malaria was excluded. Iodide of potassium in increasing doses was now prescribed, with a hypodermic injection of morphine during the exacerbations of the pain, especially at night, and the patient's condition improved so much that now he is able to sleep moderately well and walk about with comparative ease. He has been able to pass his urine without the use of the catheter on a few occasions, and also to do without the use of morphine.

The most striking feature of this case was the abnormal position of the bladder. Whether it was due to a congenital displacement or to the pathological condi-

tion of this organ is an open question. If we recall to mind the numerous attachments of the bladder to the surrounding parts, we can understand how difficult it must be for this viscus to get displaced even by mechanical causes. I have been unable to find any analogous case or any reference made to this condition in the medical works at our command. One of the chief objects of reporting this case is to suggest that it is of the utmost importance to bear in mind that this evidently was only one of the many anomalous conditions that might occur to mislead even the most careful diagnostician when called upon to perform a laparotomy in cases where there is undoubted intestinal obstruction, and to emphasize the importance of absolutely excluding every other possible complication before resorting to the knife.

This case was watched with much interest by every medical officer on duty in this hospital, as all of them were warm personal friends of the patient.

Therapeutical Notes.

Antiseptic Gelatin in Erysipelas.—The *Riforma medica* for May 2d ascribes the following to Gallois:

B Water	1,500 grains;
Gelose	15 "
Corrosive sublimate, { of each,	1½ grain.
Tartaric acid.	

For local application.

[Gelose is the active gelatinizing principle of the nutrient gelatin obtained from agar-agar.—Ed.]

An Aromatic Saline Bath.—The *Riforma medica* for May 1st ascribes the following to Loiret:

B Bromide of potassium	15 grains;
Carbonate of calcium	60 "
Sulphate of sodium	75 "
Phosphate of sodium	120 "
Carbonate of sodium	4,500 "
Essence of lavender	15 "
Essence of rosemary	15 "
Essence of thyme	15 "

For one bath.

An Application for Infantile Ecthyma.—Dauchez (*Bulletin général de thérapeutique*, March 15th; *Riforma medica*, April 6th) recommends the following application for favoring the detachment of the crusts:

B Glycerite of starch	60 parts;
Ammoniated mercury	1 part;
Sodium sulphite	10 parts.

M.

An Elixir of Hamamelis.—The *Riforma medica* for April 7th attributes this formula to Loiret:

B Fluid extract of hamamelis	3 parts;
Syrup of bitter-orange peel	50 "
Tincture of vanilla	2 "
Alcohol	18 "
Distilled water	27 "

M. A tablespoonful with each meal.

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THE VETO OF THE COLORADO MEDICAL BILL.

THE Cannon medical practice bill, which recently passed both houses of the legislature by a good majority, has been vetoed by the governor. The bill is spoken of by both the *Colorado Medical Journal* and the *Denver Medical Times* as a great improvement on the law now in force, although the first-named journal prints the following extract from a letter from Dr. J. T. Eskridge: "In regard to the medical bill, I worked for its passage, but felt all the time that it would be vetoed by Governor Thomas. Had the plain statements been inserted in the bill, excluding 'isms' and sects, religious, etc., the law would have been equally effective and would have received the governor's approval. Had he approved the bill as it passed the legislature, it would have caused many contests in the courts, as it was not clear from the wording of the bill just what 'ism' followers were allowed to vaunt their faiths. After so many of the physicians of Colorado made the statement in the daily papers that no one except followers of the three schools were included in the bill, had litigation been started subsequently it would have placed the medical profession in a bad light before the public."

But it appears to have been on no such consideration for the public welfare as Dr. Eskridge expresses that Governor Thomas founded his veto. Had he done so, or had he even vetoed the bill without giving his reasons, the medical profession of the State, although disappointed, would not have felt outraged, as it certainly does at present. We have seen only extracts from the governor's veto message, but they are enough to show that he took the occasion either to exploit certain crude and whimsical notions of his own or—and this seems the more likely—to bid for the political support of "every mountebank in Colorado," "every worn out prostitute posing as a magnetic healer," and "all the bigoted old Pharisees of 'Christian Science,'" as the *Denver Medical Times* puts it. In short, the governor of Colorado has abused and insulted the medical profession, and quite needlessly even from his own low point of view. It is hardly necessary to say to those who attended the Denver meeting of the American Med-

ical Association a year ago that Colorado has changed governors. It was most gratifying to listen to Governor Adams's just and appreciative words; it is humiliating to reflect that he has so soon been succeeded by a demagogue who, as the *Colorado Medical Journal* phrases it, rates the medical profession as "beneath the quacks, blacksmiths, Christian Scientists, pugilists, and gamblers."

PIED FORCÉ IN SOLDIERS.

MILITARY medical officers well know the trouble that is occasioned in troops on prolonged marches by a swollen condition of the feet, which has been the subject of many and various interpretations. The actual nature of these lesions has been carefully studied by M. Boisson and M. Chapotot, military medical officers of the French army, who report their results in a valuable paper in the *Archives de médecine et de pharmacie militaires* for February.

The condition itself has been described in turn by Pautat in 1857, Poulet in 1888, Martin in 1891, and Busquet in 1897. The principal characteristics are the supervention during a march of swelling on the dorsum of the foot, accompanied by pain more or less severe, either occurring spontaneously or provoked by pressure or movement, and functional incapacity. Pautat's explanation was that of traumatic periostitis, due, in his opinion, to the footgear and leading to exostoses on the second, third, and fourth metatarsals, those on the second being the most frequent; but he made no reference to crackling or crepitation, symptoms which, according to Boisson and Chapotot, are almost always present. The exostoses, however, he did not find in the earlier examinations, a fact which has considerable bearing on the authors' subsequent explanations. Poulet considered the lesions to be of the nature of rheumatic osteoperiostitis, and in his opinion the footgear was in no sense responsible, though he omits to say whether in his cases any history of traumatism was forthcoming. Martin referred the condition to arthritis and synovitis, as a result of eighteen observations. Finally, Busquet published in the *Revue de chirurgie* a memoir upon ossifying osteoperiostitis of the metatarsals, which he divided into three classes—viz.: 1. Direct primary, immediate, traumatic periostitis due to repeated slight shocks on the fore part of the dorsum of the foot. In this form the furrow in the upper leather of the shoe he considered to play an important etiological rôle. 2. Indirect traumatic periostitis. 3. Diathetic periostitis.

At the Congress of Hygiene and Demography, held

in April, 1898, in Madrid, Stechow, of the Prussian guard, made a communication on fractures of the metatarsals as a cause of swollen feet in soldiers. Concerning the mechanism thereof, Stechow says: If the heads of the first and fifth metatarsals are joined by a straight line, the heads of the others will make a salient angle in the form of a segment of a circle whose centre will be found in the anterior part of the first cuneiform, and whose radius will be about seven or eight centimetres. In the normal position the big toe and its metatarsal bear the shocks coming from in front, but when the inner edges of the feet are parallel, it is the second metatarsal whose head is in advance, and it is this or the others which will bear the brunt of a shock to the skeleton of the foot coming more or less from the side. Stechow, reasoning from skiagraphical examinations in thirty-six cases, arrived at the conclusion that in nearly all instances a fracture of the metatarsals was the cause of the injury under investigation. The left foot suffered more than the right, and the bones fractured were respectively as follows: First metatarsal, one; second, nineteen; third, fourteen; fourth, two. The authors, carrying on their researches from this point, endeavor to show that it is the act of marching to which these accidents, whether fractures or arthritis, must be attributed.

In all the cases examined by them in the great autumn manoeuvres of 1898 the second metatarsal was the seat of injury. Occasionally, also, the third suffered. The fracture always occurred in the continuity of the diaphysis, usually at the junction of the posterior third with the anterior two thirds, though at times in the middle. The fractures commonly occurred in a V shape, with the concavity forward. Sometimes the fragments were displaced, the branches of the V being more or less widely separated, and the anterior fragment somewhat deflected externally. In one case only was the fracture comminuted, and in no case was it transverse.

The rapid swelling, remaining for a long time, especially if the subject continues to march, the customary absence of ecchymosis, the support offered by the other metatarsals, and the small dimensions of the metatarsal diaphysis render it extremely difficult to elicit crepitation, which, however, may often be obtained by perseverance. An additional sign of the nature of the injury is to be found in pain on pressure over the seat of fracture and at a distance from the articular surfaces. A subjective sign of value in the diagnosis between fracture and arthritis is found in the fact that, in consequence of the support lent by the other metatarsals, it is possible for the soldier to raise himself on

tiptoe, which is impossible in arthritis in consequence of the pain occasioned.

As to the mode of production, the authors point out the immobilization of the second metatarsal by remarkably strong ligaments, by its position between the first and third cuneiforms, and also, when regarded from the inferior aspect, by its being locked between the tuberosities of the first and third metatarsals. The first metatarsal, on the other hand, is much more mobile. It moves in every direction on the first cuneiform, while the third is nearly equally movable. The fourth and fifth are the most movable of all. On the march, when the foot is firmly planted, the antero-posterior curve of the plantar vault tends to straighten itself, and the metatarsals glide over the tarsal facets. But in the case of the first metatarsal, which in progression gives the final point of support and serves almost exclusively for projection forward, we have to take into account the rigidity afforded by the powerful muscles whose tendons are inserted either at its posterior extremity or on the first cuneiform, thus assuring it the support of a tendinous network. Its own powerful flexors and extensors, moreover, contribute actively to this immobilization of the articular surface, especially as they contract in the execution of the movement.

The transverse arch of the plantar vault, maintained not only by the passive resistance of its ligaments, but also by the action of the abductor of the great toe and the tension of the peroneus longus, is equally subject to the influence of the weight of the man and his equipment. Consequently, any functional inefficiency of these muscles permits the flattening of the transverse plantar curve, and consequently the approximation of the second and third metatarsals to the plane upon which the foot rests. It is thus seen how the two concavities of the plantar arch may be depressed and flattened during the march. If, moreover, the muscles, tendons, and ligaments which fix the first metatarsal relax under the influence of fatigue, the latter, insufficiently sustained, tends to give way, leaving the resistance of the ground to act almost exclusively upon the extremity of the second metatarsal, which, by reason of its length, its comparative slenderness, and its proximity to the inner border of the foot, is found, fixed as it is at its tarsal extremity, in just the position to be broken under the conditions of a lever of the second order.

The authors next report cases and give Röntgen pictures showing the seat of fracture, and conclude that the condition known as *pied forcé* is always due either to fractures of the metatarsal diaphysis, principally the second, or to arthritis and strains of the metatarsal articulations; also that these conditions are to be attrib-

uted to marching in the way in which it is performed by soldiers—that is, for a prolonged time and weighted with equipment. On the other hand, when traumatism, falls, shocks, etc., occur, the type of fracture is modified, often involving the three central metatarsals. Overriding of the fragments and more or less marked articular lesions are often superadded, and when that is the case the effect is such as to render the subject unfit for military service. The “exostoses” described by Pauzat, (which were not found by him in the earlier examinations) are considered by the authors to be simply the callus formation at the seat of fracture, such as they themselves show, and which had hitherto been wrongly interpreted.

The condition described and explained by the authors is naturally not confined to military service. Many obscure cases of injury to the foot without any history of traumatism, in civil life, will no doubt receive elucidation by these researches.

THE WOMAN'S MEDICAL COLLEGE.

It is announced that the Woman's Medical College of the New York Infirmary for Women and Children closes its career with the expiration of the collegiate year. The closing of the school has been determined upon, not on account of anything unsatisfactory in its work or any present lack of patronage, but because of a frank recognition on the part of the trustees that the medical education of women can be better accomplished in another school, that of Cornell University, where they will be taught in the same classes with men, under the same faculty, and with the same clinical opportunities. The trustees add to their announcement an expression of their belief that the infirmary will hereafter be doing its best for the medical education of women by increasing its clinical facilities. Thus, we may suppose, the infirmary will speedily take an advanced position in the post-graduation instruction of medical women.

When Cornell University decided to establish in New York a medical school in which men and women would be taught together, the opinion was freely entertained that the institutions devoted exclusively to women students would find themselves under a competition that it would be very difficult for them to survive. From the sentimental point of view, this prospect was regretted even by the Cornell men themselves, for there has been unstinted recognition of the good work done by the Woman's Medical College for the last forty years; but it was felt, on the other hand, that there were really too

many schools in New York, and that the trustees and faculty of the Woman's Medical College would in fact loyally welcome the advent of an era of greater opportunities for the study of medicine by women. We may be allowed to say that the trustees have acted most creditably by doing promptly and spontaneously what they might otherwise have had to do eventually as the outcome of a struggle in which their resources might have been so taxed as seriously to impair the infirmary's usefulness.

The Woman's Medical College of the New York Infirmary for Women and Children has done a good work. Its memory will always be esteemed in the profession. No more graduates will go forth from its halls, but the diplomas it has already issued will be justly treasured by their holders and duly honored by medical men and women alike. We wish the infirmary all possible prosperity in its widened sphere of clinical teaching, and congratulate it on the wisdom displayed by its board of trustees.

MALARIAL DISEASE OF THE CENTRAL NERVOUS SYSTEM.

THE massing of Laveran's parasite in the blood-vessels of the central nervous system is among the rare events in pathology, as is remarked by Dr. G. Marinisco (*Comptes rendus de la Société de biologie*, 1899; *Medizin der Gegenwart*, May), who, in a recent post-mortem on the body of a woman who had suffered with malarial disease and died with symptoms of grave nervous disturbance, found the parasite so plentiful in the arterioles and capillaries of the brain and spinal cord that the gray substance was almost violet, and the white substance of a bluish gray.

THE RIGHT OF MUNICIPALITIES TO MAINTAIN HOSPITALS BEYOND THEIR OWN BORDERS.

WE are glad to be able to say that Governor Roosevelt has signed Assemblyman Henry's bill authorizing cities of the first class to maintain hospitals for the treatment of pulmonary consumption beyond their corporate limits. This will overcome any possible opposition to the establishment by the city of New York, for example, of such institutions in the Adirondacks and elsewhere in the State.

CORIAMYRTIN AS A MEDICINE.

THERE is reason to expect that this glucoside, though a violent poison, resembling picrotoxin in its action, may prove serviceable in the treatment of collapse. It appears from investigations by Ribem, Pernier, and Koppén, summarized in the *Klinische therapeutische Wochenschrift* for April 29th, that the dose in which it stimulates the respiratory and circulatory centres is less than that required to produce convulsions. Schenckelberg gives the maximum medicinal dose as fifteen one thousandths of a gram. Fischer has found it useful, combined with caffeine, in the circulatory disturbances that follow acute infectious diseases.

A NEW GERMAN SEMIMONTHLY.

We have received the first number of the *Deutsche Aerzte-Zeitung*, a double-columned royal octavo of twenty-four pages, edited by Dr. E. Stadelmann, of Berlin, and published in that city. It contains a number of interesting communicated articles, abstracts, and society reports, also a New York letter signed "Carl Beck." The new journal presents a very pleasing appearance.

THE REPORTED EXTENSION OF THE PLAGUE.

THE reported extension of the bubonic plague to Hong Kong and Egypt is rather disquieting. We have confidence, however, that it will not secure a foothold in Europe, and we trust that our sanitary service in the Philippines will prove equal to the task of keeping it away from those islands, although there has been scant time for methodical organization there.

THE REINA MERCEDES AND YELLOW FEVER.

It seemed at the time almost incredible that the people of Norfolk should object to the captured Spanish cruiser *Reina Mercedes* being taken to their city for repairs, as some of them are reported to have done, and we are glad to learn that they have since overcome their fears. It is understood that the surgeons-general of both the navy and the Marine-Hospital Service are satisfied, and with good reason, it seems to us, that the vessel is perfectly free from the germs of yellow fever.

THE NEW YORK QUAKERS ON VIVISECTION.

THE Friends of New York are to be commended for the moderation displayed in their recent reply to a communication from the Friends' Antivivisection Association of London. "We feel," they say, "that, while vivisection may be justifiable as a means of gaining knowledge for alleviation of disease, we believe the practice for the purpose of testing or illustrating what is already known to science should be discouraged and restricted."

YELLOW FEVER IN NEW ORLEANS.

It is reported that one case of yellow fever has occurred recently in New Orleans, and that the State board of health, on the strength of a post-mortem examination of the patient's body, has notified the boards of neighboring States, whereupon the State health officer of Texas has established a quarantine, and this in spite of an alleged agreement on the part of several of the Southwestern States not to take such action on account of the occurrence of a single case of the disease. We think the New Orleans health officer, Dr. Soneloh, was amply justified in sending to the Texas health officer the following dispatch: "I deeply regret your action. Send inspector to judge for himself. No other case anywhere."

THE NATIONAL COLLEGE OF ELECTRO-THERAPEUTICS.

THIS is the name of an institution in Lima, Ohio, which advertises that it gives a "mail course of instruction," but adds that "no instruction is given in medicine or surgery in the mail course." Some months ago

an individual living in Passaic, N. J., took the "mail course" and, on the strength of the diploma which was issued to him at its conclusion, began to practise medicine. He was accused of practising illegally, convicted, and sentenced. In his defense he had submitted the diploma in question, but it appears from an editorial in the May number of the *Electro-therapeutist* that the diploma did not purport to constitute its recipient a doctor of medicine. Nevertheless, the Passaic case has been made the basis of a number of articles in various medical journals reflecting upon the college. While we do not approve of "mail courses," and know nothing of the merits of the National College of Electro-therapeutics, we must say that the institution seems to have been unjustly criticised in this instance.

THE REMOVAL OF BELGIAN RESTRICTIONS ON AMERICAN CATTLE.

ACCORDING to a special dispatch to the *Sun*, the Belgian government has decided to discontinue the restrictions on the importation of American cattle. They were imposed five years ago and were founded, it is said, on the errors of Belgian veterinarians. The United States Bureau of Animal Industry has done incalculable good to the country in various matters, and now it is probably to be credited with bringing about this reestablishment of justice in Belgium.

THE HEARING IN LOCOMOTIVE EMPLOYEES.

MUCH attention has been paid of late years to the subject of color-blindness in railway employees, but not so much, so far as we have observed, to the acuity of their hearing. Dr. V. Saxtorph Stein (*Nordiskt medicinskt Arkiv*, April) has examined forty-four firemen and thirty-eight engine-drivers, and found only three out of the whole number to possess perfectly normal hearing power. He finds, however, by frequent excursions on locomotives, that these employees hear sound signals well enough under favorable circumstances, except those of the whistle. Nevertheless, he thinks there should be established a minimum standard of requirement as to the hearing.

AGRICULTURAL LABOR FOR LUNATICS.

At the recent meeting of the American Medico-psychological Association Dr. G. Alder Blumer, of the Utica State Hospital, read a paper entitled *The Care of the Insane in Farm Dwellings*, in which he told of the good effects upon a number of chronically insane men of daily work on a farm under the supervision of a young farmer and his wife who had no special knowledge regarding the care of the insane. The improvement in the patients' condition, physical and mental, said Dr. Blumer, "exceeded the most sanguine expectations." This seems to us a line of inquiry well worthy of further pursuit.

A GRAVE ACCUSATION AGAINST TWO PHYSICIANS.

THE press dispatches state that two physicians have been arrested in Rhenish Prussia charged with having caused the death of several recruits by drugging them for the purpose of securing their exemption from military service. It is difficult to believe that members of our profession would engage in any such work, or, having entered upon it, would conduct it so recklessly as to

give rise to the fatal results reported. We hope to see the accused physicians cleared of the charge.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending May 27, 1899:

DISEASES.	Week ending May 20.		Week ending May 27.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	12	8	58	4
Scarlet fever.....	196	14	212	17
Cerebro-spinal meningitis.....	0	8	0	7
Measles.....	438	18	404	16
Diphtheria.....	219	25	238	31
Croup.....	13	10	12	4
Tuberculosis.....	170	141	169	141
Small-pox.....	1	0	12	5
Chicken-pox.....	32	0	34	0

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general during the week ending May 27, 1899:

Small-pox—United States.

Los Angeles, Cal.....	May 6-20.....	4 cases.	
Washington, D. C.....	May 6-20.....	1 "	1 death.
West Tampa, Fla.....	May 13-20.....	5 "	
Savannah, Ga.....	May 9-21.....	10 "	
Evansville, Ind.....	May 13-20.....	7 "	
Louisville, Ky.....	May 14-20.....	18 "	
New Orleans, La.....	May 12-20.....	5 "	
Shreveport, La.....	May 13-20.....	1 "	
Swampscott, Mass.....	May.....	1 case.	
St. Paul, Minn.....	May 6-13.....	1 "	
St. Louis, Mo.....	May 2-22.....	12 cases.	
Cleveland, Ohio.....	May 13-20.....	13 "	
Johnstown, Pa.....	May 13-20.....	1 case.	
Niagara, Pa.....	May 25.....	25 cases.	
Philadelphia, Pa.....	May 13-20.....	6 "	
Ponce, Porto Rico.....	Apr. 29-May 6.....	4 "	
Newport News, Va.....	May 21.....	1 "	
Norfolk, Va.....	May 19-25.....	9 "	
Portsmouth, Va.....	May 19-25.....	11 "	
Spokane, Wash.....	May 13-20.....	4 "	
Milwaukee, Wis.....	May 13-20.....	2 "	

Small-pox—Foreign.

Antwerp, Belgium.....	Apr. 22-29.....	11 cases.	3 deaths.
Prague, Bohemia.....	Apr. 29-May 6.....	4 "	2 "
Hongkong, China.....	Apr. 1-23.....	6 "	16 "
London, England.....	Apr. 22-29.....	3 "	
Hamburg, Germany.....	Apr. 29-May 6.....	3 "	
Athens, Greece.....	Apr. 18-25.....	21 "	8 "
Bombay, India.....	Apr. 18-25.....	9 "	
Calcutta, India.....	Apr. 14-21.....	3 "	
Madras, India.....	Apr. 15-21.....	1 death.	
Kagasaki, Japan.....	Apr. 1-20.....	1 "	1 "
Osaka and Hirogo, Japan.....	Apr. 15-22.....	1 case.	
Ciudad Juarez, Mexico.....	May 6-13.....	3 deaths.	
Mexico, Mexico.....	May 1-11.....	33 cases.	10 "
Nuevo Laredo, Mexico.....	Apr. 29-May 6.....	1 death.	
Nuevo Laredo, Mexico.....	May 6-13.....	1 "	
Moscow, Russia.....	Apr. 15-29.....	11 "	9 deaths.
Odesa, Russia.....	Apr. 29-May 6.....	1 case.	2 "
Bluefield, Nicaragua.....	Apr. 29-May 6.....	1 "	
Bluefield, Nicaragua.....	May 6-13.....	1 "	
Straits Settlements, Singapore.....	Feb. 1-28.....	16 "	
Straits Settlements, Singapore.....	Mar. 1-31.....	18 "	

Yellow Fever.

Vera Cruz, Mexico.....	May 4-11.....	22 deaths.	
Vera Cruz, Mexico.....	May 11-18.....	26 "	

Cholera.

Bombay, India.....	Apr. 18-25.....	6 deaths.	
Calcutta, India.....	Apr. 8-15.....	9 "	

Plague.

Hongkong, China.....	Apr. 1-8.....	19 cases.	14 deaths.
Hongkong, China.....	Apr. 8-15.....	10 "	12 "
Hongkong, China.....	Apr. 15-22.....	31 "	31 "
Bombay, India.....	Apr. 18-25.....	412 "	
Calcutta, India.....	Apr. 8-15.....	135 "	
Madras, India.....	Apr. 15-22.....	1 death.	

St. Vincent's Hospital.—The new wing was formally opened by Archbishop Corrigan on Decoration Day. The ground floor contains casualty wards, St. Antony's ward with nine beds, furnished by Miss Teresa O'Donohue, receiving rooms, pharmacy, and dispensary. On the next floor are the parlors, St. Teresa's ward and St. Aloysius's ward, containing thirty-one beds, furnished by Mrs. Teresa R. O'Donohue and Miss Eleanor Iselin. On the floor above are St. Vincent de Paul's ward and St. Joseph's ward, furnished respectively by Mrs. John Beresford and the Rev. Dennis P. O'Flynn; on this floor also are the medical officers' quarters. Higher still are St. Adrian's, St. Ambrose's, and St. Lawrence's wards, containing forty-one beds and furnished respectively by Mrs. de Lancy Kane, Mrs. Jeremiah Campion, and Miss Teresa Iselin; there are also private wards on this floor. The fifth story contains St. Margaret's, St. Helena's, and St. Rose's wards, containing in all forty-one beds, and furnished respectively by the Ladies' Auxiliary, Mrs. Iselin, and Mrs. A. L. Ashman; also private wards. The sixth floor, St. Matthew's Hall, is furnished entirely for the occupation of the Sisters by Matthew Rowan. On the top floor is an admirably constructed operating theatre, generously equipped by an anonymous doctor, with anæsthetizing rooms, sterilizing chamber, X-ray apparatus, surgeons' dressing and bath rooms, etc. The new wing will prove a great addition to the charitable institutions of the city.

A Plague Quarantine at Malta.—According to the *Sun*, passengers arriving at Malta on vessels from Egypt must swear that they have not been in Egypt within twenty-one days, or else undergo quarantine on ship-board for that length of time.

The German Medical Society of the City of New York.—At the next regular meeting, on Monday evening, June 5th, Dr. Hermann Kahn will present an instance of a child born alive and almost at term, weighing less than a pound; Dr. Max Einhorn will read a paper on Floating Liver and its Clinical Significance; Dr. C. H. Richard Jordan will read one on The Surgical Treatment of Suppuration of the Ear; and Dr. W. Freudenthal will present one on The Nature of the Diseases reputed to be Due to Exposure to Cold.

The Ontario Medical Association will meet in Toronto on Tuesday and Wednesday, June 13th and 14th.

The Buffalo Academy of Medicine.—A special meeting was held on Thursday, May 25th, for the purpose of taking proper steps to secure the meeting of the American Medical Association in Buffalo, June 1, 1901 (Pan-American year).

The Alumni Association of the College of Physicians and Surgeons is reported to have received at a recent meeting to set up in the college building a tablet commemorative of those of the alumni who lost their lives in the service during the recent Spanish-American war.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, May 27th, Dr. John Young Brown reported a case of pyometria.

Changes of Address.—Dr. Herman B. Baruch, from June 1st to October 1st, corner of Cedar and Second Avenue, West End, Long Branch, New Jersey; Dr. J. H. Porman, to No. 2313 Seventh Avenue, New York; Dr. S. A. Knopf, to No. 16 West Ninety-fifth Street, New York; Dr. J. A. Shears, to No. 319 West Thirty-third Street, New York.

Erratum.—In our issue for May 27th, on page 749, there appeared an article headed Muscular Atrophy of the Skin. The first word of the title should have been *macular*.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending May 27, 1899:*

PALMER, S. B., Assistant Surgeon. Resignation accepted from May 15th.

ARNOLD, W. F., Passed Assistant Surgeon. His leave of absence on account of sickness is extended two months.

DE LANCY, C. H., Assistant Surgeon. Detached from the marine recruiting rendezvous, Savannah, and ordered to the *Amphitrite*.

MAKSTELLER, E. H., Surgeon. Detached from the *Raleigh* and ordered home to await orders.

MOORE, J. M., Passed Assistant Surgeon. Detached from the *Raleigh* and ordered home to await orders.

ROGERS, F., Surgeon. Ordered to the marine rendezvous, Philadelphia, for duty in connection with recruiting.

Appointment.

WRIGHT, BARTON L., Assistant Surgeon. May 16th.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the Marine-Hospital Service for the Seven Days ending May 18, 1899:*

MURRAY, R. D., Surgeon. Upon being relieved from duty at Mobile, Alabama, and upon expiration of leave of absence granted by bureau letter of the 11th inst., to proceed to Key West, Florida, and assume command of the service.

GODFREY, JOHN, Surgeon. Bureau order of May 10, 1899, directing Surgeon Godfrey to report to the chairman of the board of examiners at Detroit for examination to determine his physical condition, revoked.

MEAD, F. W., Surgeon. Upon being relieved from duty at Portland, Maine, to proceed to Vineyard Haven, Massachusetts, and assume command of the service.

PECKHAM, C. T., Surgeon. Relieved from duty at Pittsburgh, Pennsylvania, and directed to proceed to Galveston, Texas, and assume command of the service.

WHITE, J. H., Surgeon. To proceed to New York for special temporary duty.

MAGRIDER, G. M., Passed Assistant Surgeon. Granted leave of absence for thirteen days from May 19, 1899.

SMITH, A. C., Passed Assistant Surgeon. To rejoin station at Norfolk, Virginia, reporting at Washington, D. C., en route.

EAGER, J. M., Passed Assistant Surgeon. To proceed to Detroit, Michigan, and report to medical officer in command for duty and assignment to quarters.

STEWART, W. J. S., Passed Assistant Surgeon. Upon being relieved from duty at Vineyard Haven, Massachusetts, to proceed to Mobile, Alabama, and assume command of the service.

THOMAS, A. R., Assistant Surgeon. Bureau letter of March 30, 1899, directing Assistant Surgeon A. R. THOMAS to proceed to the Tortugas Quarantine Station and assume command of the service, revoked.

CUMMING, H. S., Assistant Surgeon. Granted leave of absence for one day. Bureau order of March 30, 1899, assigning Assistant Surgeon CUMMING to duty at the Cape Charles Quarantine, revoked. Upon being relieved from duty at Norfolk, Virginia, to proceed to the South Atlantic Quarantine Station and assume command of the service. Granted leave of absence for twenty-seven days.

CLARK, TALLAFERRO, Assistant Surgeon. Upon being relieved by Assistant Surgeon H. S. CUMMING, to report to him for temporary duty. Relieved from duty at the South Atlantic Quarantine Station and directed to proceed to the Tortugas Quarantine Station and assume command of the service.

McMULLEN, JOHN, Assistant Surgeon. Relieved from duty as sanitary inspector on United States transport *Buford* and directed to report to medical officer in command, United States Marine-Hospital Service at the Immigration Depot, New York, for temporary duty. Relieved from temporary duty at the Immigration Depot, New York, and directed to proceed to Portland, Maine, and assume temporary command of the service.

ANDERSON, J. F., Assistant Surgeon. To proceed to Norfolk, Virginia, on special temporary duty, and then to proceed to New York and report to medical officer, Marine-Hospital Service, at the Immigration Depot for temporary duty.

McADAM, W. R., Assistant Surgeon. Relieved from duty at Key West, Florida, and to continue in temporary charge of the Tortugas Quarantine Station. To report to medical officer in command, Tortugas Quarantine Station, for duty.

CRAIG, R. C., Acting Assistant Surgeon. Relieved from duty at New York and directed to proceed to Pittsburgh, Pennsylvania, and assume temporary charge of the service.

BIRFORD, R. E. L., Sanitary Inspector. Granted leave of absence for thirty days on account of sickness. Bureau order of May 19, 1899, convening a board of officers of the service to meet at Detroit, Michigan, for the physical examination of GODFREY, JOHN, Surgeon, revoked.

Appointments.

MERRILL, WALTER E., of Maine, appointed acting assistant surgeon, United States Marine-Hospital Service, for duty at Portland, Maine. May 11, 1899.

HENDERSON, W. S., of Michigan, appointed acting assistant surgeon, United States Marine-Hospital Service, for duty at Port Huron, Michigan. May 11, 1899.

Society Meetings for the Coming Week:

MONDAY, June 5th: American Academy of Medicine (third day); American Medical Publishers' Asso-

ciation (Columbus); New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, New York, Academy of Medicine; Utica, New York, Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, June 6th: American Medical Association (first day—Columbus); New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, New York, Academy of Medicine; Ogdensburg, New York, Medical Association; Syracuse, New York, Academy of Medicine; Medical Societies of the Counties of Franklin (semiannual), Herkimer (quarterly), Niagara (annual—Lockport), Saratoga (annual), and Yates (annual), New York; Hudson (Jersey City) and Warren (annual), New Jersey, County Medical Societies; Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, June 7th: Maine Medical Association (first day—Bangor); American Medical Association (second day); New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, New York (New Brighton); Penobscot, Maine, County Medical Society (Bangor); New Hampshire State Medical Society (annual—Concord); Orleans, Vermont, County Medical Society (annual); Bridgeport, Connecticut, Medical Association.

THURSDAY, June 8th: Maine Medical Association (second day); American Medical Association (third day); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; New York Laryngological Society (New York); Medical Societies of the Counties of Cayuga, Cortland (annual), and Fulton (semiannual), New York; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, June 9th: Maine Medical Association (third day); American Medical Association (fourth day); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, New York.

SATURDAY, June 10th: Obstetrical Society of Boston (private).

Births, Marriages, and Deaths.

Married.

ARMSTRONG—KENDALL.—In Brooklyn, on Monday, May 29th, Dr. William L. Armstrong, of New York, and Mrs. William B. Kendall, Jr.

BARRAS—LOWE.—In New Orleans, on Monday, May 22d, Mr. Valtrine Barras and Miss Bertha Lowe, daughter of Dr. M. M. Lowe.

EDWARDS—SOUTTER.—In New York, on Monday, May

29th, Dr. James Clifton Edgar and Miss Ellen Muriel Beatrice Soutter.

HOLDEN—MEAD.—In New York, on Tuesday, May 16th, Dr. Eugene Martin Holden, of Boston, and Miss Ida Frances Mead.

WARNER—MILLER.—In Glens Falls, New York, Dr. Harry Mead Warner and Miss Harriet Esther Miller.

WEBSTER—LUSK.—In New York, on Saturday, May 27th, Dr. Clarence Webster, of Montreal, and Miss Alice Lusk, daughter of the late Dr. William T. Lusk.

Died.

EDMONDS.—In Bristol, Vermont, on Tuesday, May 23d, Mrs. G. F. Edmonds, wife of Dr. George F. Edmonds.

HARGIS.—In Pensacola, Florida, on Wednesday, May 24th, Dr. Robert W. Hargis, aged fifty-three years.

MOIR.—In Edinburgh, Scotland, Dr. John Moir, F. R. S. E., in the ninety-second year of his age.

PFEIFFER.—In New York, on Monday, May 22d, Dr. Charles W. Pfeiffer, in the forty-sixth year of his age.

SHOWERMAN.—In Batavia, New York, on Thursday, May 25th, Dr. James M. Showerman, in the sixtieth year of his age.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

XXI.

RECOVERY OF COMPENSATION.

(Continued from page 756.)

Proof of Employment.—The physician having shown himself authorized to practise medicine, the next step in establishing his right to recover is to show his employment. If the suit is instituted for the purpose of recovering for services rendered to the defendant himself or any immediate member of his family for whose medical services he is primarily responsible, then the mere fact of the services having been rendered by the physician and accepted by the patient is sufficient to establish employment. If, however, the services have been rendered to some third party, for whose medical attendance the defendant is not primarily liable, this step in proving the case may require great care and skill. The law governing liability in such cases is fully treated in a preceding article.

Proving Services Rendered. Having passed very briefly over the method of proving the physician's right to practise medicine, and his proof of employment, we will pass to the next and, to him, more important step of proving the services rendered.

The question of how far a physician may go in giving testimony upon this point is often a very nice one, for the statutes of many States place a seal of secrecy upon the lips of the physician with regard to knowledge obtained in a professional way. The Civil Code of New York provides that a physician "shall not be allowed to disclose any information on which he is engaged in attending a patient in a professional capacity and which was necessary to enable him to act in that capacity." In

New York a physician brought a suit to recover for services, and the patient filed a general denial to the physician's complaint or preliminary statement of facts upon which he relied for recovery. The question then arose as to what facts the physician would be permitted to testify to under the law from which this quotation is taken. He attempted to, and, in fact, did, in the trial court testify to the defendant's physical condition and the disease for which he treated him; but upon appeal the judgment was reversed because the physician had no right, under the law above quoted, to disclose such information, the patient not having waived his privilege. It was urged by the physician's counsel that the patient, by his general denial, waived the privilege. The court, however, held this ground to be untenable, notwithstanding the general denial did make it incumbent upon the physician to prove all of the facts upon which he based his case; had, however, the patient set up, as a defense, incompetency, unskillfulness, or misconduct, he would then have put in direct issue the manner of treating the disease, and would doubtless have been held to waive the privilege, thereby permitting the physician to testify to the condition he found existing in the patient and to the treatment which he prescribed. It was also urged in this case that if the physician were not permitted to describe the disease with which the patient was afflicted he could not show the value of the services, but the court was of the opinion that such a result did not necessarily follow. Justice Haught, who wrote the opinion, said: "The physician can still testify to his employment, to the number of visits made, to the examinations, prescriptions, and operations, and if the defendant objects to his describing them the physician may testify as to their value."^{*}

This rule would preclude the physician from corroborating his testimony as to the value of the services because he could not communicate the character of the services rendered to another physician to enable him to form an opinion as to their value; but it is obvious that the defendant could not produce a witness to dispute the value of such services without making public the facts which the plaintiff was forbidden to disclose, thereby enabling the plaintiff to produce expert evidence in corroboration of his own testimony as to the value of the services rendered.

Books of Account in Proving Claims.—Unless the services upon which the suit is brought have been very recently rendered it will be extremely difficult, if not impossible, for the physician to testify to the time of making each visit and the value of the same without having recourse to his books of account.

At such a time the physician's books of account may generally, if properly kept, be made use of for a double purpose: first, they may be used to refresh the mind of the physician in testifying to the facts referred to therein, and, second, they may be introduced as evidence to prove the account upon which suit is brought. As a means of refreshing his memory, it is proper for a physician upon testifying to have recourse to his books either where he recollects the facts and can testify from memory, or where he does not recollect the facts, but made or saw the writing when the facts were fresh in his mind and remembers that it then stated the facts correctly.[†]

No general rule can be given as to when, where, and

under what circumstances the books of account are admissible as evidence of the facts stated in them, as the subject is one upon which the decisions from the courts of the several States are irreconcilable; moreover, many States have statutes regulating the subject which are peculiar to the particular jurisdiction. In New York the physician's books of account are admissible as evidence upon his showing them to be his regular books of account, and proving that he kept no clerk who was familiar with his business and competent to testify regarding the facts stated in the books; that some of the work or services charged was performed, and that he kept correct accounts.^{*} The proof that the physician keeps correct books of account should be made by patients who have settled bills by his books.[†] The physician's wife, who transcribes or enters items into the physician's books, is not a clerk within the meaning of the above qualification.[‡] In Pennsylvania the physician's books of original entry are admissible in evidence upon being properly proved to be such.[§] In Indiana it is very doubtful whether books of account are competent evidence.^{||} The rule as it exists most generally is that the books of original entry are admissible when properly proved. If the entries are in the handwriting of the party himself, then he may prove the same; if in the handwriting of a clerk, then such clerk must identify or prove the account; but if the person who made the entries is dead, mentally incapacitated, or beyond the jurisdiction, the books may be received in evidence upon proof of the handwriting of such person.[^] This rule must, however, be understood as subject to many qualifications and exceptions.[◊]

It is generally required that the books be those of original entry. Such is the requirement in many of the States.[‡] In Pennsylvania it is held that a book containing entries transferred from time to time, as the parties had leisure, from a blotter, which is preserved and in the possession of the party offering the book, is not admissible as a book of original entries, the blotter being the permanent record of the transaction.[§] If, however, such entries are first made upon slips of paper or cards and then copied into a book, such book becomes one of original entries.^{||} If these temporary memoranda are made by one person and transcribed into the book by another, it will probably be necessary to call not only the person transcribing them to prove the entries made in the book, but persons making the original memoranda as well, to prove that at or about the time the charges were made services were performed similar to those charged in the book.^{**}

Books of Account, How to be Kept.—It is advisable

* *Voshug vs Thayer*, 12 Johns., 461; *Atwood vs. Barney*, 80 Hun, 1.

† *Bentley vs. Clark*, 41 Hun., 126.

‡ *Smith vs. Smith*, 13 N. Y. App. Div., 297.

§ *In re Fulton Est.*, 178 Pa. St., 78.

|| 9 A. and E. Encycl. of L., 2d ed., 905.

^ *Melbridge vs. Watts*, 1 McGord (S. C.), 384.

◊ See 9 A. and E. Encycl. of L., 2d ed., 903 et seq.

‡ The courts of Kentucky, Maine, Massachusetts, Minnesota, Missouri, New Jersey, Pennsylvania, South Carolina, Texas, and Vermont require that the book shall be one of original entry.

§ *Brengin vs. Metzler*, 23 Pa. St., 156.

|| *Davidson vs. Powell*, 16 How. Pr., 167; *Patton vs. Ryan*, 4 Rawle (Pa.), 498.

** *Chicago Lumber Co. vs. Hewitt*, 61 Fed. Rep., 316; *Miller vs. Shay*, 145 Mass., 162; *Paine vs. Sherwood*, 21 Minn., 225.

* Van Allen vs. Gordon, 83 Hun., 379; 31 N. Y. Supp., 907.

† Chase's *Stephen's Dig. of Evidence*, Art. 137, N.

to refer at this point to the manner and method of keeping the physician's books of original entry. It has been observed that a physician may be required to state specifically the nature of each service rendered and charged upon the account, especially if the amount charged for the same is of an unusual character; it therefore is necessary that some explanation be entered with each item which will enable the physician to refresh his memory and testify to the particular services rendered.

Upon the other hand, if the books are desired to be used in evidence in those States extending to professional communications between physician and patient the privilege of secrecy, they must not divulge matters coming within the protection of the statute, otherwise they will be objectionable and will be excluded upon motion of the patient or his personal representatives. Generally speaking, any information obtained by the physician in his professional intercourse with his patients which was necessary to enable him to treat them, and also the character of treatment advised or prescribed by him, are within the protection of the statute.* Here is clearly a case where the requirements of the law on the one hand, and the prohibition of the law upon the other, conflict in such a way as to subject the physician to a severe hardship. This hardship it is thought may be overcome if the physician living in a State which enjoins silence as to all knowledge professionally obtained will invent a code of arbitrary signs and characters, and by the use of these characters describe the ailments for which he treats his patients, together with the services rendered by him. Such characters when used must, however, be completely unintelligible to others, and it can not be safely advised that he would be permitted to disclose his system to another and still claim the privilege of having his books containing such characters admitted in evidence.

Illustrations.—Should the physician have been so indiscreet as not to keep a book of accounts, and is unable to recall and testify specifically to the items of the account upon which he brings suit, or is prohibited from so doing by reason of the death or mental unsoundness of the patient, his ability to recover is a matter of very grave doubt. In the case of *Administrator, etc., of Galtney vs. Leggett*, Dr. Leggett brought suit to recover among other sums one upon an open account for medical services rendered Galtney and his wife, children, and servants during the years from 1836 to 1842, and which amounted in the aggregate to one hundred and forty dollars. Leggett's only witness was John W. Monnett, Galtney's regular family physician, by whom it was proved that Leggett attended Galtney's family in his absence. He testified that he had seen Leggett at Galtney's house two or three times, but did not say at what time. He did not know anything about any of the charges made, nor of Leggett's making any visits at the time charged; he knew nothing of the items; that he had heard Galtney frequently say that he had employed Leggett as his physician when he was absent; that Galtney's family, white and black, numbered nearly one hundred persons, and they were often sick; that he had called two or three times in consultation with Leggett at Galtney's house; that the prices charged for the services were according to the usual rates; that Galtney and Leggett were very intimate, and that it was not unusual

for men situated as they were to suffer accounts to run on uncollected for a long time. Justice Thatcher, in commenting upon the case, said: "The evidence, however, upon which the jury found for the plaintiff some portion of the account for medical and surgical services seems extremely vague and uncertain. The only witness called by the plaintiff to establish this account could speak neither as to the time or the character of the services charged, and, in point of law, gave no testimony as to the account filed. It is true that it is difficult for accounts of this character to be strictly proved, nor indeed is it necessary; but it would seem to be always in the power of a physician or surgeon to show that he was in the habit of keeping correct books of accounts, and that the account sued upon had been correctly copied from his books. It is also true that the court will not lightly disturb the findings of a jury in cases of this kind where they are particularly the proper judges of the weight of the evidence; but in the present instance the evidence does not seem at all to warrant the verdict upon the account."

And, again, in the case of *Simmons vs. Means*, in which suit was brought to recover a hundred and fifty dollars for medical services generally and medicines furnished to defendant and his family, and in which the jury found a verdict for the plaintiff for a hundred and thirty dollars, the evidence showed that during the period charged in the account the plaintiff was the family physician of the defendant, and was seen several times going to and from the defendant's residence, and was frequently at the house of the defendant; and that the charges contained in the account filed were in accordance with the customary rates in that locality.

Justice Thatcher, passing upon this case, also said: "The evidence introduced to prove the account was to the effect that the plaintiff below was the practising physician in the family of the defendant, and that he was seen passing to and from the defendant's house, during the time included in the account; and that 'he did practise in his family' during the period, together with proof that the amounts charged in the account were according to the customary rates. The items of the account do not appear in the record. The bill of exceptions does not show of what character the professional services or medicines supplied were, or that any, in fact, were supplied. The evidence that the physician practised in the family, and was seen going and returning from his house, is not sufficient to create a legal presumption of indebtedness by the defendant. This court has gone so far as to authorize a physician to recover in an action against his patient by establishing upon a trial the facts of his habit of keeping correct books of accounts, and that the account sued upon had been correctly copied from his books. But with this exception, physicians must be held, like others, to the customary rules of evidence. In this view the finding (of the jury in favor of the physician) in this case was plainly unwarranted by the evidence."*

Nor has the jury any right to assume, because most of the items of such an account have been positively proved to be correct, that all of the items are correct. The court, in a case involving this point, said through Justice Fisher: "The plaintiff must either prove his account by direct and positive proof, or show that he keeps correct books, and that his accounts have been correctly transcribed."

* The subject of privileged communications will be fully treated in further articles about a full list of the States in which such law in force will be given.

* *Simmons vs. Means*, 10 Mass. 117.
1 Mass. 117. 1841.

And, again, in the case of *Déjol vs. Johnson*, admr, in which a physician's bill had been allowed and paid to the amount of \$612.55, Justice Spofford said: "The large medical bill is not justified by the evidence. There is no detailed account of items. Two or three visits to the parish of Calcasieu, about forty miles from Dr. Thornton's residence in Flat Town, and constant attention to the deceased for a fortnight in his own house, whither *Déjol* was removed before his death, together with the furnishing of medicines, are all the services specifically proved. It is true a witness states that the doctor attended the deceased for six or eight months before his death. The disease was also a loathsome one. But the opinion of this witness that the bill was a just and correct one can not supply the lack of data to support such an opinion. Upon a survey of the evidence we are satisfied that three hundred dollars would be a liberal allowance for the services as proved, and the item charged as paid to Dr. Thornton must be reduced to that sum." *

In proving that professional services have been rendered, it is competent for the physician to produce a witness to testify that the physician left his office, taking medicine with him, and said he was going to visit the particular patient, and started in the direction of the place where he lived.† It will be understood from the preceding cases that this evidence is simply corroborative in effect and is valuable only for the purpose of strengthening the evidence of the principal witness who testifies as to the particular services rendered.

Proof of Amount of Claim.—There is no presumption of law concerning the value of a physician's or surgeon's services, and there is no presumption that a jury can ascertain it without testimony of some kind from persons knowing something about such value.‡ It has been shown that the plaintiff is a competent witness to testify to the value of the services which he has sued to recover, the patient being alive and of sound mind. Should any other physician be cognizant of the character and extent of the services upon which suit is brought, it will also be competent for him to testify to their value; or, if the case is such that the plaintiff is not precluded from disclosing the character of the defendant's disease and the nature and extent of his services, then he may call upon any regular physician to testify as to their value. When such testimony is given regarding the value of the services rendered and none is given to contradict it, the jury is not permitted to disregard the evidence and form an independent conclusion, but must find in accordance with the evidence.¶ Should conflicting evidence upon this point be adduced by the parties, it then becomes the duty of the jury to scrutinize it and deliberate upon the matter with care, so as to arrive as nearly as possible at the true value of the services performed.

The supreme court of Louisiana lays down the rule that where the witnesses differ as to the proper charges to be made by physicians, the correct rule is to allow the lowest estimate.||

Should the case be one of a difficult operation, and the ability and professional standing of the physician specially high, these facts are proper for the considera-

tion of the jury and will justify a greater compensation.* A witness who is produced to show the value of the services in question must testify regarding the value of the particular services upon which suit is pending or those of the same character.† It is not necessary that the physician should prove the value of the services to the patient, the value to be proved by him is the ordinary and reasonable price for services of that nature.‡ The reasonableness of the charges can not be established by a witness proving what the same physician had charged him in a similar case,§ nor is one not a physician competent to testify as to the value of such services.|| While in epidemics custom may sanction an increased rate of charge, such conditions will not justify exorbitant fees, and in estimating the correct amount the court is inclined to the lowest estimate given by witnesses.△

(To be continued.)

Pith of Current Literature.

Airol as an Application in Rupture of the Perinæum.—Dr. M. Ebersson (*Therapeutische Monatshefte*, January; *Wiener medizinische Blätter*, April 13th) finds airol superior to iodoform as an application to perineal ruptures that have been sutured, but he advises that it be used sparingly; otherwise, like iodoform, it will cake and obstruct the escape of discharges.

"Phosote," a New Creosote Compound.—The *Klinisch-therapeutische Wochenschrift* for April 30th says that the French have given the name of "phosote" to a creosote ether containing eighty per cent. of creosote and twenty per cent. of phosphoric anhydride. It is described as a syrupy liquid having a faint odor and taste of creosote. It is employed in tuberculous disease like creosote carbonate and oleate and the corresponding compounds of guaiacol.

Trichloroacetic Acid for Persistent Perforation of the Membrana Tympani.—Dr. Felix Pettesohn (*Berliner klinische Wochenschrift*, 1899, Nos. 15 and 16; *Wiener klinische Rundschau*, May 7th) reports a gratifying degree of success in causing perforations of the membrana tympani to close by the employment of Okuneff's method of canterization with trichloroacetic acid. The acid is applied to the cicatrized border of the perforation, and, according to the effect produced, the canterization is repeated in four, eight, or fourteen days, care being taken not to apply it too often. The pain is severe, but lasts only a few minutes. In case a scab forms, it is well to wait for its spontaneous detachment.

Resuscitation from Drowning by Rhythmical Traction on the Tongue.—According to the *Medical and Surgical Review of Reviews* for April, citing the *Tribune médicale* for January 18th, one evening two boatmen heard a body fall into the water. In consequence of the darkness several minutes elapsed before they found and pulled out a young woman, who was absolutely inert,

* *Déjol vs. Johnson*, admr., 12 La. Ann., 855.

† *Antanga Co. vs. Davis*, 32 Ala., 703.

‡ *Wood vs. Barker*, 49 Mich., 296.

§ *Ibid.*

|| *Succession of Dutche*, 11 La. Ann., 406.

* *Lange vs. Kearney*, 4 N. Y. Supp., 11; affirmed, 127 N. Y., 676.

† *Trenor vs. Central P. R. R. Co.*, 50 Cal., 222.

‡ *Styles vs. Tyler*, 64 Conn., 132.

§ *Collins vs. Fowler*, 1 Ala., 517.

|| *Mock vs. Kelley*, 3 Ala., 387.

△ *Collins vs. Graves*, 13 La. Ann., 95.

into their boat. Immediately, without returning to land, they opened her mouth with the handle of a knife placed between the teeth, and practised rhythmical traction of the tongue, following the prescribed directions to get rid of the imbibed water. After ten or twelve minutes she regained consciousness.

Resuscitation in asphyxia and in threatened death during anaesthesia by rhythmical tractions on the tongue was introduced a few years ago by Laborde. The writer in the *Tribune* comments on the importance of at once seizing the tongue and practising tractions without waiting to carry out any of the traditional directions, as to the position of the body, removal of clothes, etc.

Diaphragmatic Pleurisy.—Zuelzer (*Münchener medizinische Wochenschrift*, November 22, 1898; *Canada Lancet*, March) gives a description of pleurisy as it occurs between the diaphragm and the lung; a form which is very apt to give rise to localized encapsulated empyemata. There are certain special characteristics which enable the diagnosis of this condition to be made even in the absence of physical signs. These consist chiefly in certain tender points. The first is round the base of the thorax at the level of the insertion of the diaphragm; the second is in the posterior triangle of the neck, where the phrenic nerve lies on the scaleni muscles; and the third is found where an imaginary line prolonged in the direction of the tenth rib cuts the parasternal line. It was first described by Guéneau de Mussy and named by him the "*bouton diaphragmatique*." The presence of tenderness and pain in this position is most important, and is almost pathognomonic of diaphragmatic pleurisy, more especially of the localized suppurative form. Dr Mussy and most writers since him have considered this to be the tender point of the phrenic nerve, though von Ziemssen disputes this on the ground that the function of this nerve is entirely motor. Other peculiarities of this variety of pleurisy are: 1. The pain is abnormally violent and diffuse. 2. Movement is almost suppressed in the hypochondrium and base of the thorax on the affected side. 3. Physical signs may be absent, or consist in a limited tympanitic resonance at the extreme base, and *minus* breath sounds, owing to the compression of the lung by the effusion. 4. Occasionally there is pain on swallowing as the food passes the diaphragm. 5. Hiccough may be present, either from direct irritation of the diaphragm, or possibly of the vagus or phrenic nerves.

It is important to remember that these effusions, when near the centre of the diaphragm, are out of reach of the exploring syringe. One of the cases seen by the writer gave a striking illustration of the value of de Mussy's point in diagnosis. A woman, aged thirty, fell ill with fever and pain in the breast. There were no abnormal physical signs in the lungs, and an exploratory puncture gave a negative result; the phrenic nerve in the neck, however, was tender and the *bouton diaphragmatique* extremely painful, and by these symptoms alone Dr. Bonveret, of Lyons, diagnosed supplicative diaphragmatic pleurisy, and immediately handed the case over to the surgeon. An encapsulated empyema was found and evacuated. The woman recovered.

The Difference between the Effects of Mental Overwork and Worry on the Child and on the Adult. Dr Graham Brown (*Scottish Medical and Surgical Journal*, May), in an article on Treatment of Diseases of the

Nervous System, says that there is a curious difference between childhood and adult life as regards the effect of mental work and of worry on the brain. In the adult it is difficult to injure the brain by overwork, because, when a certain intensity of strain has been reached, the brain refuses to work any longer and the man is forced to rest. On the other hand, it is quite easy to do serious injury to the brain of a child by pressing him in regard to mental work, and this happens even more readily in neurosthenics than in healthy children. The reverse is the case with regard to worry. This falls lightly on a healthy child, and the most serious trouble may at any time be dissipated by the administration of a sugar plum. In a man, on the other hand, cares and worries are not readily shaken off. The mind can not easily forget them, and sleep is interfered with. A neurotic child takes an intermediate position in this matter. Worries and anxieties are apt to fix themselves in his mind in a quite morbid fashion.

In conclusion, a word may be said as to mental work and mental exhaustion in neurotic children. Even in the perfectly healthy child we know from many observations that an hour or two of such work produces an exhaustion which is quite perceptible in that it blunts the tactile sense to a degree capable of being measured. In neurotics exhaustion of the cortex is even more readily produced, the visual field, for example, becoming distinctly smaller. This points to the necessity of making the periods of work of a neurotic youth short, and of interposing muscular exercise between each. It might be possible in any individual case, by direct testing of the visual or tactile sense, to say whether too much exhaustion was being occasioned, or, in other words, whether the mental work done was proving too much for the boy.

The Micro-organism of Scarlet Fever.—At a recent meeting of the Chicago Medical Society Dr. W. J. Class (*Journal of the American Medical Association*, April 8th) described a micro-organism which he believed to be the specific causative factor of this malady. Klein, in a large number of cases, had isolated a streptococcus considered by him and by a number of French observers to be the cause of scarlet fever. Crajkowski, in 1895, reported that he found, in fifteen cases in which he examined the blood of scarlet-fever patients, a diplococcus present in comparatively small numbers, seldom more than one or two in a microscopic field. This diplococcus did not stain by Gram, and only feebly and then quickly losing its color by any method. Cultures were obtained in bouillon and upon solid media, but not on gelatin. The development was said to be slow, and the colonies resembled small drops of dew, not more than one third to one half of a millimetre in diameter. It was pathogenic for mice, but not for rabbits. Crajkowski, in consequence of the failure of the various careful scientists who took up this work to find a specific germ either in the scales or in the secretions from the throats of scarlet-fever patients, did not assert that the aetiological relation of this diplococcus to scarlet fever had been demonstrated. Dr. Class believed that the fault lay with the culture media employed, as it was a well known fact that some germs were very selective in this respect. After numerous failures, he finally succeeded in finding a culture medium on which he had been able to almost invariably obtain, both from the scales as well as from the throats of scarlet fever patients, the growth of an organism which presented such characteristic features, both in its morphology as well as in its growth, that he

had little hesitancy in asserting it to be the specific germ of scarlet fever.

Morphology.—The diplococcus as ordinarily seen on slides made from fresh cultures resembled a very large gonococcus. This biscuit-shaped appearance was best seen in specimens that had been but lightly stained; in these there was also noted a transverse line running through each half of the organism, giving it the appearance of a tetrad. This appearance was, however, not constant, especially in older cultures, where the organism frequently presented itself as a diplococcus, both segments of which were perfectly globular. The size of the organism also presented a number of variations, but it was always considerably larger than the ordinary pus microbe. The lancet-shaped forms that occurred in the pneumococcus were never met with. Usually, unless in spreading the culture on the slide it was rubbed very hard, these cocci occurred in bunches of from ten to fifty, being united by a large amount of glutinous intercellular substance. Streptococcus forms were occasionally, though rarely, met with, as were also single cocci. They had no capsule and did not show any spores, had no flagellæ, and, examined by the hanging drop, did not show any independent motion.

Staining.—Specimens derived from pure cultures were stained with a number of the aniline stains. With a watery solution of methylene blue very pretty pictures were obtained, especially when only lightly stained; carbol fuchsin also stained them well, and brought out their characteristics. They also stained with Bismarck brown and with Pitfield's flagella stain, but did not stain very deeply, however, with any of the stains mentioned. They were destained by Gram's method, though not to the same extent as the gonococcus, the larger variety of the germ holding the stain somewhat better than the smaller.

Biological Characters.—The culture medium on which this germ grew was prepared as follows: Glycerin agar-agar was made according to the method generally used; to this was added about five per cent. by weight of black garden earth, which had been rendered sterile by intermittent heating. The garden earth was first dried thoroughly, then sifted through a very fine hair sieve until it was reduced to a fine powder, all particles of gravel, sand, etc., being removed; it was then mixed with sufficient bouillon to form a thin paste. This was boiled for an hour, enough sterile bouillon being added from time to time to replace that evaporated by boiling; it was then set in a warm place for a few days to allow the spores found in the earth to develop. It was next boiled for an hour, after which it was again set aside for a few days. This procedure had to be repeated until no growth was developed. It was then added to the agar-agar, which mixture was also boiled for about thirty minutes, and then put aside for a few days to see if any germs developed. Should this be the case, the mixture was again boiled and tested as before. On this medium the scales of a scarlet-fever patient were placed with a sterile platinum loop, and the tubes were put in an incubator, the temperature of which was left at 35° C. Within from forty-eight hours to one week small whitish-gray semitransparent colonies appeared along the tract of inoculation and around the scale. These colonies were isolated at first, but subsequently confluent; their diameter varied somewhat, but in general was about one micromillimetre. On taking up with a platinum needle some of the material of which the colony was composed, it was seen to be glutinous. If the culture

medium was very dry, as happened when the colonies were old, they lost their viscosity and became grayer in color.

On agar-agar and glycerin agar-agar there was no growth. On gelatin the result was also negative. Bouillon was not clouded by the germs, and they apparently did not multiply in this medium. On the blood serum furnished by the health department for the diagnosis of diphtheria there was a growth, but it was much more meagre than on the culture medium described by the author. That the germ had not been noticed when examinations were made with blood serum was probably due to the fact that other germs which were always present on the scales grew so much more abundantly than the diplococcus that their presence was overshadowed, while in the author's medium the diplococcus grew almost to the exclusion of all other organisms. Milk did not appear to be affected by the diplococci, although they apparently multiplied in it. On potato there was no growth.

Pathogenesis.—Rabbits and guinea-pigs were inoculated by subcutaneous injection of a pure culture, by scarification and inoculation of the wounds produced, and by injection into the abdominal cavity, without producing the slightest results. The negative result of the subcutaneous injection showed that the germ was no pus producer, at least not in the species mentioned. Other animals were at present being experimented with by Dr. Class.

The germ described had been cultivated from the scales of about thirty cases of typical scarlatina. It had also been found in the angina of scarlatina, and in cases of angina occurring in persons exposed to scarlet fever in whom no eruption showed, and, lastly, he had found it in the throats of children in a family where one member had typical scarlatina, the children being in a normal condition when the culture was made, but subsequently developing a typical rash, in the scales from which he also cultivated the same germ.

Self-intoxication from the Intestinal Canal.—Dr. Beattie Nesbitt, of Toronto, the editor of the *Dominion Medical Monthly*, has been investigating an important aspect of this subject in the pharmacological laboratory of the Johns Hopkins University. He presents the results of his researches in the January number of the *Journal of Experimental Medicine*, in an article entitled *On the Presence of Choline and Neurine in the Intestinal Canal during its Complete Obstruction*.

Dr. Nesbitt's experiments lead him to believe that complete occlusion of the small intestine at its lower end will give rise to the occurrence of choline, neurine, and perhaps other bases, provided the food taken contains any considerable quantity of lecithin. It is not improbable, he thinks, that still other poisons are formed by bacterial action from other constituents of the food in cases of intestinal obstruction. While choline would have to be absorbed in relatively large amounts to exert a marked toxic action in human beings, he says, it is different with neurine, which is many times more intense in its action, and must be classed with the exceedingly active poisons. It has been shown both by the experiments of Schmidt and Weiss, Dr. Nesbitt remarks, and also by those recorded in this paper, that the poisonous neurine may be formed from choline by bacteria. In its physiological action neurine agrees closely with muscarine; and especially to be noted is its paralytic action on the heart and its power to increase

the intestinal movements to such an extent that continual evacuations occur. Whether the ptomaine which was found by him is poisonous he can not yet say. It must be considered proved, however, he thinks, that highly toxic substances may arise in the intestinal canal during its complete occlusion. The method of treating cases of intestinal obstruction, before surgical means are resorted to—namely, by washing out the stomach and as much of the gut as possible—often reduces the violent peristalsis, and this is due, perhaps, to the removal of substances out of which irritating and toxic products are formed by bacteria.

In conclusion, Dr. Nesbitt remarks that our knowledge of the fate of lecithin in the digestive canal under normal conditions is very deficient. The assumption that it is saponified by the fat-splitting enzyme of the pancreatic juice, thus yielding choline, glycerophosphoric acid, and fatty acids, rests on the work of Bokai in 1877, in which, as that investigator himself admits, bacterial action was not excluded. This omission throws grave doubts on the results. If the assumption of Bokai is correct, caution must be observed in the use of some foods that have been considered most nutritious and healthful; for instance, the ingestion of a meal made up largely of eggs would hardly be without danger, because of the poisonous action of the large quantity of choline liberated from the lecithin and the probability of the formation of the highly poisonous neurine.

A Case of Family Periodic Paralysis.—At the recent meeting of the Association of American Physicians Dr. J. K. Mitchell (*Medical News*, May 13th) reported the case of a boy, aged eighteen years, who had attacks of paralysis occurring at frequent intervals. He might retire perfectly well, and yet awake in the morning helpless, paralyzed from head to foot, with total abolition of skin, muscle, and tendon reflexes, loss of faradaic and galvanic contractility, unchanged sensibility, and unimpaired mind and speech. Five cases of a similar nature had been seen in his mother's family. The boy had been kept in the hospital occasionally for periods of six months, so that careful blood examinations and a careful study of the body excretions could be made in order to determine if possible the presence of toxins. While this had not been entirely successful, Dr. Mitchell was not inclined to look upon the case as purely hysterical, but rather believed it to be due to self-intoxication.

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

Meeting of February 8, 1899.

The President, Dr. WILLIAM L. STOWELL, in the Chair.

The Doctor Outside of Medicine.—The President delivered an address on this subject. (See page 765.)

Syphilis Affecting Both Eyes.—Dr. H. S. OBERHEIMER presented the following case: A young man, twenty-one years of age, came to the speaker two or three weeks ago with the following history: His left eye had received a blow from a baseball some eight years ago, which injury had rendered the eye entirely

useless, according to the patient's notion. His right eye on New Year's day had been struck on rising from a stooping posture, at the temple, not at the eye itself. After this "bump" he had noticed that his right eye was not as good as it had been. The speaker had examined the eye, and the examination of it put quite a different phase upon the case and the preconceived notion of it, after hearing the history. In the left eye, the one which was said to have been struck with the baseball eight years before, he had found a very marked picture of a retrogressive neuroretinitis. The nerve was partially atrophied, but around the macular region there was a beautiful deposit of pigment with the macula itself showing almost as brilliantly in the middle of this as it did in embolism of the artery. In the right eye the picture was different, but very much the picture that the other one might have presented if it had been seen earlier. In the cornea of the right eye there was a distinct marking of what was called descemetitis. It was a series of opacities, as if a pepper box had been spilt on the posterior portion of the cornea. It was a distinctive symptom of serous iritis. The vitreous humor was filled with all sorts of opacities, one of a horse-shoe shape, and a number of smaller ones and floating opacities. In the fundus there was an exudation into and under the retina, showing in its neighborhood some of the pigment deposits similar to those shown in the left eye; in short, a process in the retina, and perhaps more or less in the choroid, which had come to nearly its end in the left eye, was to be seen in the right in a more recent stage. The etiology was this: There had been a primary lesion about a year before, and he had gone promptly to a physician, frightened about it; there was a hard, painless lump which the doctor had burned out. The patient had continued to go to his physician again and again, being nervous over it, but finally the doctor had said that there was nothing to be apprehended, and that he need not come any more. The case was presented on account of the interesting picture that the eyes presented to those who used the ophthalmoscope, and also as showing another one of the cases in which the primary lesion had been destroyed, in which, in spite of the fact that this had occurred over a year ago and there had been no secondary symptoms, there was a distinct characteristic picture of syphilis of the eye. There was no lesion in the skin, but there was a slight enlargement of the glands, which moved freely, and which the author had seen more pronounced in perfectly healthy persons; there was no history of any eruption; there was no history of any pains or aches, or any lesions in the mouth or throat, which one was apt to inquire for.

Dr. A. T. MIZZY said that the picture in the left eye was certainly a very characteristic and beautiful one for that condition. The case was one of those objective conditions that could be seen with the mirror; otherwise it needed the history and progress under treatment, such as the doctor described, to make us sure of our ground. In the speaker's experience he had never met with such a pronounced eye picture without plenty of gross lesions in other situations, notably pharyngeal, or the usual history of a primary stage.

Dr. J. B. BUSTEN said, in regard to the absence of secondary symptoms, that this was not uncommon in the disease of syphilis, for he had often found a patient with a typical sclerosis and eruptions, without further symptoms, go on for the rest of his life and die of some other disease. One would have an eruption and nothing

else; another would have a sclerosis and mucous patches, and nothing else for years, and then again a man would have a sclerosis, but not the mucous patches, and he would go on, and years later have a syphilitic disease of the ear, or, in the same way, a syphilitic disease of the eye.

Dr. GEORGE T. JACKSON said that he agreed with Dr. Oppenheimer in his statement that he had often found the inguinal and other glands enlarged in perfectly healthy people. He thought too much stress was laid on the enlargement of the glands as a sign of syphilis. We often saw patients with syphilis in whom the glands were apparently not enlarged at all, at least none could be found. He regarded enlargement of the glands as a corroborative, but by no means a positive sign of syphilis.

Dr. OPPENHEIMER said that the case was interesting to him because it surprised him. To begin with, the boy had given a history of traumatism when there had not been any trace of it, but the blood-vessels in the right eye had shown a distinct affection. The left eye had shown the pigmentation beautifully, and also some affection of the vessels. That this disease should exist without either the outer covering or the inner covering of the patient's—i. e., the skin or mucous membranes—being affected, and again that there should be a serous iritis, was rather unusual, and he thought it might be of interest to Charity Hospital graduates to notice that the primary chancre had been destroyed, and yet it had made no difference in the advance of the disease. He thought the patient would recover; he probably would not have perfect sight in the left eye, because that process had run its course and there was more or less atrophy of the nerve; but the right eye would probably recover from the trouble in the vitreous and in the retina.

Strangulated Hernia and Undescended Testicle.—Dr. BISSELL presented a specimen, taken from a man fifty-eight years old, of a strangulated hernia with an undescended testicle in the inguinal canal.

Foreign Body in the Thumb.—Dr. BISSELL showed a Röntgen picture of a girl's hand with a needle in the thumb close to the bone. The patient had been operated upon and the needle had not been found; cellulitis had followed, and a few days later a Röntgen picture had been made, and by means of the plate the needle had been taken out with one slight incision.

Rupture of the Heart.—Dr. NEWTON presented a heart with the following history: F. M., single, American; carpenter; aged twenty-eight years. On September 19th he was riding a bicycle rapidly when his front wheel struck a piece of rubber and canvas hose four inches in diameter. This hose was lying on the ground and was filled with water, which it was conveying under considerable pressure from a hydrant to a water cart. As to precisely what happened after the collision with the hose the accounts of the two or three eyewitnesses to the accident differ somewhat. The wheel, however, was broken at or near the junction of the fork and the head, and the man was thrown a foot or two in the air, falling heavily to the ground. He got up and staggered toward the water cart, holding on to his left side. He then sank upon the ground and became nearly but not quite unconscious, at the same time groaning and writhing with pain and showing a tendency to curl himself up, rolling over on his left side. Dr. Wilson, of Bloomfield, was brought, who thought that the patient was suffering from concussion. A hypo-

dermic of brandy was given, and the man was directed to be taken to the Mountainside Hospital.

Before reaching the hospital he revived a little, so that he could give his name and residence. He was still helpless and in great pain. He was brought into the dispensary and placed upon the examination table. His pulse was 78, regular, and moderately strong. He asked for water two or three times, but was scarcely able to swallow any of it. He would throw himself about as though struggling for air, and was inclined to roll over toward the left side. He did not seem to the attendants like a man fatally hurt, but rather like one who had been badly shaken up by a severe fall and who had severe colicky pains. The surgeon on duty, who happened to be Dr. Newton, was summoned, but before his arrival the man quietly died. There had been no vomiting, and the bladder had not been emptied. There had been no convulsions or spitting of blood. Dr. Washington, the county physician, was notified, and on the following day permitted a partial autopsy. The body was that of a well-nourished, muscular young man. Except two or three unimportant abrasions on the legs and a small punched-out semicircular mark on the skin over the sixth rib on the left side, no external injuries were noted. An inch or two inside of the semicircular mark just referred to was a slight depression of the surface, and pressure over this elicited the fact that the sixth costal cartilage had been fractured. On opening the chest nothing abnormal was observed, except the fracture, as noted above, and some laceration of the neighboring intercostal muscles. The pleura and pericardium were intact. The latter, however, appeared somewhat distended, and on opening it from eight to ten ounces of dark clotted blood were observed between its pericardial and epicardial layers. When the heart was lifted it was observed to be about normal in size, perhaps a little hypertrophied; the walls were relaxed and the cavities contained a few post-mortem clots. A rather large transverse rent, with everted edges, was noted at the apex of the right ventricle. The measurements of the rent were an inch and a half externally and three eighths of an inch internally. The internal opening was immediately contiguous to the interventricular septum.

Dr. Newton said that he thought there was no doubt that the tear had been made from without inward; that the heart had been struck in systole by the broken end of the sixth costal cartilage, which had pushed the pericardium before it and ruptured the ventricular wall at its thinnest portion without tearing the pericardium.

Dr. MANGES opposed this view of the receipt of the injury, maintaining that the probabilities were strongly in favor of a rupture from within outward.

Dr. RUFF agreed with the first speaker, and thought that as the external wound was so much larger than the internal, and the history pointed so strongly toward direct injury, there was little doubt that the rent had occurred as Dr. Newton suggested.

Dr. NEWTON called attention to the fact that the heart was of about normal size, and possibly a little hypertrophied; that the muscle fibres were apparently quite healthy; that the subject was an athletic young man in excellent physical condition, and an experienced bicycle rider. There was no likelihood, therefore, of a spontaneous rupture, as the cardiac structures were in an excellent condition, and, as to a rupture from strain, he doubted if it ever occurred through healthy ventricular walls.

He regretted that he had not had time to investigate this case thoroughly or to look up the literature of the subject, but he intended to do so, and would report later to this society or some other in reference to the matter.

Book Notices.

The Pathology and Treatment of Sexual Impotence.

By VICTOR G. VECKI, M. D. From the Author's Second German Edition, revised and rewritten. Philadelphia: W. B. Saunders, 1899. Pp. 11 to 291. [Price, \$2.]

THIS work should prove of great interest and value to the practitioner, for, as the author says in his introduction, "it must be admitted that the subject has never received the attention its preeminent importance deserves. The world over, it seems to be considered the proper thing to treat the affair with supercilious nonchalance." Yet reflection will surely make it clear that a subject which is the natural basis of love, the foundation of the home and the family, which is intimately associated with the character and general appreciation of life, and with the mental, moral, and physical well-being of the entire organism, can not be so universally neglected without evil consequences as far reaching as the sexual functions themselves.

How often is not suicide the result, direct or indirect, of impotence? Strong as the statement is, we feel that it is not altogether wide of the mark when the author says: "I venture to assert that in many cases it is a better deed to restore to an impotent man the powers, so precious to every individual, than to preserve a dangerously sick person from death, for in many cases death is preferable to impotence."

The work deals systematically and in detail with the anatomy of the male genital organs and the physiology of the sexual act. The author then discusses the etiology of impotence, and its forms, which he subdivides into five classes—viz.: 1. That due to congenital malformations and defects of the sexual organs. 2. That due to acquired defects. 3. Consecutive impotence. 4. That due to inherited predisposition. 5. Neurasthenic impotence. The diagnosis, prognosis, and prophylaxis are next treated of in separate chapters, and finally the subject of treatment is dealt with in a most exhaustive manner in all its phases. This section is especially "up to date."

The author expresses what seems to us very sound views on the knowledge to be imparted to the adolescent and on the manner of its imparting and the limitations thereof. The comparison of the difference between the evil effects of masturbation (which, however, the author continuously terms onanism, the proper name for what he elsewhere refers to as "frauding" in the sexual relations) and excessive venery is exceedingly well drawn.

There is much that will not be agreed to by many when the author ventures into the field of opinion, and we make bold to suggest that sarcastic or cynical remarks about people who from training or other propensities are unable to lay aside a dominant influence and look at matters in the dispassionate light of cold facts, will militate against the author's end, where a judicious silence would have aided it. But of the inestimable

value of the actual practical part of the work as a treatise for the guidance of the practitioner in the etiology, pathology, and treatment of one of the most far-reaching and distress-producing ailments in the world, it seems to us there can be but one opinion.

BOOKS, ETC., RECEIVED.

A Text-book of Mental Diseases. With Special Reference to the Pathological Aspects of Insanity. By W. Bevan Lewis, L. R. C. P. (Lond.), M. R. C. S. (Eng.), Medical Director, West Riding Asylum, Wakefield, etc. Second Edition, thoroughly revised, enlarged, and in part rewritten. With Illustrations in the Text, Charts, and Twenty-six Lithographed Plates. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. xxvi-609. [Price, \$7.]

Atlas of Diseases of the Skin. Including an Epitome of Pathology and Treatment. By Professor Dr. Franz Mraček, of Vienna. Authorized Translation from the German. Edited by Henry W. Stelwagon, M. D., Ph. D., Clinical Professor of Dermatology, Jefferson Medical College, Philadelphia. With Sixty-three Colored Plates and Thirty-nine Full-page Half-tone Illustrations. Philadelphia: W. B. Saunders, 1899. Pp. 7 to 199. [Price, \$3.50.]

The Study of the Hand for Indications of Local and General Disease. By Edward Blake, M. D., Member of the Royal College of Surgeons, etc. Second Edition. London: Henry J. Glaisier. New York: G. P. Putnam's Sons, 1899. Pp. xvi-135. [Price, 5s.]

Clinical Lectures on Neurasthenia. By Thomas D. Savill, M. D., Physician to the West-End Hospital for Diseases of the Nervous System, London, etc. London: Henry J. Glaisier, 1899. Pp. xv-144. [Price, 3s. 6d.]

Massage and the Original Swedish Movements. Their Application to Various Diseases of the Body. By Kurre W. Ostrom, of the Royal University of Upsala, Sweden. Fourth Edition, revised and enlarged. With One Hundred and Five Illustrations. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. viii-9 to 168. [Price, \$1.]

Vital Science Based upon Life's Great Law. The Analogue of Gravitation. Agnosticism Refuted. By Robert Walter, M. D. Philadelphia: J. B. Lippincott Company, 1899. Pp. xix-17 to 319. [Price, \$1.50.]

Bad-Nauheim. Its Springs and their Uses, with Useful Local Information and a Guide to the Environs. By J. Groedel, M. D., Medicinalrat, Physician in Bad-Nauheim. Second Edition. From the German Guide to Bad-Nauheim by O. Weiss and J. Groedel. Friedberg and Bad-Nauheim: Carl Bindernagel, 1899. Pp. viii-176.

The Abdominal Brain and Automatic Visceral Ganglia. By Byron Robinson, B. S., M. D., Professor in the Chicago Post-graduate School of Gynecology and Abdominal Surgery, etc. Chicago: The Clune Publishing Company, 1899. Pp. 261.

Some Aspects of the Rice Problem in the South. By Rev. Robert F. Campbell, D. D., of Asheville, North Carolina. Second Edition. Asheville: The Citizen Company, 1899. Pp. 24.

The Scientific Transactions of the Royal Dublin Society, 1898. Volume VI. Series II. Parts XIV, XV, and XVI. Volume VII. Series II. Part I.

Mémoire sur la bactériologie, pathogénie, traitement et prophylaxie de la fièvre jaune. Présenté au Congrès international d'hygiène et démographie de Madrid. Par le Dr. Domingos Freire, Directeur de

l'Institut bactériologique de Rio de Janeiro. Rio de Janeiro: Typographia Leuzinger, 1899. Pp. ii-5 to 182.

The Scientific Proceedings of the Royal Dublin Society. Volume VIII (N.S.). Part VI. November, 1898.

Studies from the Department of Pathology of the College of Physicians and Surgeons, Columbia University, New York. Volume VI. For the Collegiate Year 1898-1899.

Proceedings of the American Medico-psychological Association at the Forty-fourth Annual Meeting, held in St. Louis, May 10 to 13, 1898.

Aceto-soluble Albumin in the Urine. A Brief Review of the Literature on the Subject, and a Report of Two Cases. By W. M. L. Coplin, M. D., of Philadelphia. [Reprinted from the *Philadelphia Medical Journal*.]

A Remarkable Case of Ventral Hernia, Cured by a Flap Operation. By George H. Noble, M. D., of Atlanta, Georgia. [Reprinted from the *American Medico-Surgical Bulletin*.]

Four Cases of Abscess of the Uterus, Treated by Incision, Curettement, Sterilization with Carbolic Acid, and Drainage. By George H. Noble, M. D. [Reprinted from the *Transactions of the Surgical and Gynecological Association*.]

The Technique of Radiography. By Alexander L. Hodgdon, M. D., of Baltimore. [Reprinted from the *Maryland Medical Journal*.]

A Glance at Psychiatry and Neurology, as it Exists To-day and in the Olden Times. By Alexander L. Hodgdon, M. D. [Reprinted from the *Maryland Medical Journal*.]

The Debt of the Public to the Medical Profession. By W. W. Keen, M. D., of Philadelphia. [Reprinted from the *Philadelphia Medical Journal*.]

Some Reflections upon Cellular Physiology and Pathology. By Augustus A. Eshner, M. D., of Philadelphia. [Reprinted from the *Journal of the American Medical Association*.]

Naphthalin in Typhoid Fever. A Remedy in Preventing Intestinal Putrefaction and Tympanites. By Albert Woldert, M. D., of Philadelphia. [Reprinted from the *Journal of the American Medical Association*.]

Gelsmium Sempervirens. By Noble P. Barnes, M. D. [Reprinted from the *Maryland Medical Journal*.]

Urotropin in Cystitis. By J. B. McGee, M. D., of Cleveland. [Reprinted from the *Bulletin of the Cleveland General Hospital*.]

Miscellany.

The Healthfulness of Sunshine.—*Practical Medicine* for May quotes the following remarks of a "California doctor," which seem to us worthy of reproduction:

"It is astonishing how few people there are who properly estimate the hygienic value of the sun's rays. A valuable lesson on this point may be learned by observing the lower animals, none of whom ever neglect an opportunity to bask in the sun. And the nearer man approaches to his primitive condition the more he is

inclined to follow the example of the animals. It is a natural instinct which civilization has partially destroyed in the human race. The effect of sunshine is not merely thermal; its rays have chemical and electrical functions. It is more than possible that sunshine produces vibrations and changes of particles in the deeper tissues of the body as effective as those of electricity. Many know by experience that the relief it affords to wearing pain, neuralgia and inflammatory, is more effective and lasting than that of any application whatever. Those who have face-ache should prove it for themselves, sitting in a sunny window where the warmth falls full on the cheek. For nervous disability and insomnia the treatment of all others is rest in sunshine."

Official Report on the Food Supply in the Philippines.—The *Army and Navy Journal* for May 13th says: "A report has been received by the surgeon-general of the army from Major H. W. Cardwell, surgeon of the First Division of the Eighth Army Corps, giving an account of the food supply and its preparations in the Philippines. Dr. Cardwell states that absolutely no fault is to be found with the supply of food or lack of it. Great ingenuity has been exercised by the various companies in the erection of brick and stone ovens in the courtyard of Cuartel for use in roasting and bread-making. The tops of many of these ovens are being used as huge stoves. The report concludes as follows: 'The issue of fresh beef has been sufficient, and its quality is first class. Companies who do not bake their own bread buy from those who do, or from the regimental bakers, and the quality is equal to the best American city bakeries. Potatoes and onions, fresh, with the usual canned goods from the commissary, and such green produce as can be obtained from the markets supply an ample vegetable ration. The issue of rice in additional quantities by the commissary is appreciated, and, strange to say, those most liable to complain that the quantity is insufficient are newly arrived organizations. I find that many, especially among the officers, who have been there for six months or more crave and eat as much meat as they did in the United States.'"

"Fake" Medical Statements in the Lay Press.—We quote the following from the *Medical Examiner* for May: "These news-mongers do not hesitate to fake in medical matters. As we have had occasion to remark in a former editorial, the most improbable and miraculous instances of medical skill and surgical procedures are minutely described without the shadow of a foundation. The developments of science and art are so wonderful in these days that fake writers take advantage of the fact and palm off almost anything of a marvelous nature upon the incredulous as truth. To-day it is not safe to either believe or deny any statement of this class offhand, but the instances are too numerous of scientific pervariation by false purveyors of news to permit the thing to go on much longer without a solemn protest. Newspapers are becoming the objects of discredit; their statements can not be believed as in former times. To follow the so-called news, scientific or otherwise, with any degree of comfort, or, as they say in mercantile life, 'E. O. E.?' that is, errors and omissions excepted, is almost impossible. It is time to ask the public to look into the matter, or the press in America will fall into disrepute. Willful lying, when detected in publications which are depended upon by our people for au-

thentic information upon affairs, should be punished in some way. If it is the intention or the business of such publications to deceive, they should so state upon their title-pages, and not speak seeming truth when truth is not to be found in them. It is practically the case now that no statement made can be believed without verification. Public morality is rapidly being undermined, and faith in current literature is fast diminishing; false notions regarding medical matters, which tend to bring the profession into contempt, are being inculcated by anonymous and irresponsible newspaper writers. This last idea may be confirmed in the reading of almost any edition of the Sunday newspaper. It is about time for medical men to look into this matter."

An Act of Medical Heroism.—The *Lancet* for May 13th records the following instance of medical heroism: A man swallowed some phosphorus paste in beer. The police sent for Mr. R. J. Burns, a surgeon of Sunderland, who promptly attended, bringing a stomach pump with him. Unfortunately, the pump was out of order, whereupon the surgeon passed the tube and sucked out the poisonous contents of the man's stomach with his mouth. Apart from the personal danger attendant on such a proceeding its repulsiveness is a condition adding materially to the nobility of the doctor's undertaking. Unfortunately, the heroic act was unsuccessful, for the patient died, while the doctor himself suffered from serious, though happily not fatal, symptoms of poisoning. There are heroes everywhere and in all walks of life; but this devotion, not only regardless of danger but unstimulated by the suggestion of romance, and under circumstances peculiarly repulsive to human sensibility, and in our judgment in excess of what duty absolutely demands, belongs to a field of opportunities especially common and incidental to the medical profession, which may congratulate itself on the possession of members like Mr. Burns, who rise to the opportunity.

The Massachusetts Medical Society.—The one hundred and eighteenth annual meeting will be held in Boston on Tuesday and Wednesday, June 13th and 14th, under the presidency of Dr. Edwin B. Harvey, of Westboro. The section meetings will be held in the Mechanic Building on Tuesday. The programme for the Section in Medicine, under the chairmanship of Dr. C. F. Folsom, of Boston, includes the following papers: The Clinical Importance of a Knowledge of the Size of the Heart, by Dr. F. H. Williams, of Boston; The Diagnostic and Prognostic Value of the Pulse, by Dr. Henry Jackson, of Boston; The Prognosis of Nephritis: A Study of Five Hundred Cases, by Dr. R. C. Cabot, of Boston; and The Role of the Staphylococcus in Skin Diseases, by Dr. C. J. White, of Boston. The order for the Section in Surgery, under the chairmanship of Dr. E. H. Bradford, of Boston, is as follows: Intus-usception, by Dr. J. C. Munro; The Completed History of a Case of Gastrocnemius. Remarks upon the Surgery of Gastric Cancer, by Dr. M. H. Richardson, of Boston; and A Lantern-slide Demonstration of the Dissemination of Chancres, by Dr. W. T. Councilman, of Boston. The Shattuck Lecture will be given on Tuesday by Dr. James J. Putnam, of Boston, on the subject of Mental Therapeutics from the Standpoints of the Physician and the Psychologist. The general meeting will be held in the Mechanic Building on Wednesday, at which the following papers will be read: Improvements in Army Medical Science, suggested by Experience in

the Late War, by Dr. W. H. Devine, Lieutenant-Colonel and Medical Director, Second Brigade, M. V. M.; A Report of the Blood Examinations in Typhoid Fever and in the Malarial Fevers, by Dr. J. J. Curry, Acting Assistant Surgeon, U. S. A.; A Hospital Clearing House, by Dr. C. J. Blake, of Boston; The Demonstration of Parasites in the Blood and Tissues in Malaria, by Dr. J. H. Wright, of Boston; and The Methods of Conducting Volunteer Aid in Foreign Territory, by Dr. E. G. Brackett, of Boston. The annual discourse will be delivered at noon by Dr. Edward H. Bradford, of Boston.

Appendicular Inflammation at Nineteen Months.—Dr. R. Millon (*Archives de médecine des enfants*, May) records the case of a female infant nineteen months old on whom he operated successfully for removal of the appendix.

An Indian Prince Vice-president of the Indian Medical Association.—The *Indian Medical Record* for April 26th says that his Highness Sir Bhagvat Singhjee Jareja, G. C. I. E. Thakore Saheb, of Gondal, is the most enlightened and most scientifically advanced of all the princes of India. He qualified as a barrister-at-law in 1886, taking the degree of LL. D. during that year. He then commenced the study of medicine in the University of Edinburgh, and graduated with honors as M. B., C. M., in 1892. In the same year he received the degree of D. C. L. at the University of Oxford, and the M. R. C. P. of Edinburgh. In 1895 he qualified for and was admitted to the F. R. C. P. of Edinburgh, and in the same year graduated as M. D. in the Edinburgh University by a thesis that was most creditably commented on. Sir Bhagvat Singhjee is the author of that well-known classical work *The History of Aryan Medicine*. The Indian Medical Association, says the *Record*, may well be proud to have a gentleman of such distinguished scientific attainments, and a nobleman possessed of so many brilliant qualifications, as its nominal head.

The University and Bellevue Hospital Medical College held its commencement exercises on Tuesday evening, May 16th, in the Metropolitan Opera House. The graduating class consisted of a hundred and sixty-two gentlemen.

More Verses on the Doctor.—The *Australasian Medical Gazette* for April 20th publishes the following:

DOCTOR.

BY A DYSPEPTIC G. P.

(With apologies to R. K.)

I entered the profession, like other men, to live;
I've found how very few and rare the prizes it can give.
I've striven long from ill and death my fellow men to guard,
And many kicks, but ha'pence scant, received as my reward.
For it's Doctor this, and Doctor that, and "Doctor's gross mistakes,"
But it's "Run and fetch the doctor," when the little finger aches.
When your little finger aches, my friends, your little finger aches;
Oh, it's "Run and fetch the doctor" when your little finger aches.

We bolt our meals, we scamp our sleep, we little know of rest;

Through four and twenty hours we wait the club patient's behest.

You ring us up at midnight, you rush us all the day,
You wear our souls and bodies out, and then refuse to pay.

For it's Doctor this, and Doctor that, and "What a monstrous bill!"

But it's "Doctor, won't you save her?" when the only child is ill—

When your only child is ill, my friends, your only child is ill;

Oh, it's "Save her, never mind the cost!" when the only child is ill.

We face the plague and pestilence, greet danger with a laugh;

We win our V. C.'s day by day, and get repaid in chaff.
The very depths of human life, the foul and mean we scan;

But bitterest of all we find the ingratitude of man.

Oh, it's Doctor this, and Doctor that, and "lazy, careless brute!"

But it's "Noblest of professions" when the pains begin to shoot—

When your pains begin to shoot, my friends, your pains begin to shoot;

It's "Noblest of professions" when your pains begin to shoot.

You spend your time in idle talk, and pass the careless lie—

How that d—d doctor messed your case, and made you nearly die.

And everywhere you seek to do him all the harm you can,

And vile traducer though you be, pose as an honest man.

For it's Doctor this, and Doctor that, it's charlatan and quack;

But it's "Skillfullest physician" when you're laid upon your back—

When you're laid upon your back, my friends, you're laid upon your back;

Oh, it's "Skillfullest physician" when you're laid upon your back.

The papers rave about our mission, which they call divine,

Or deprecate our selfishness because we dare combine.

The manna drops from heaven, they think, to feed us and our wives;

Our business not to save our own, but only other lives.

For it's "Sawbones this," and "Butcher that," and any other taunt;

But in the Valley of the Shadow it's the doctor that you want—

It's the doctor that you want, my friends, it's the doctor that you want;

In the Valley of the Shadow it's the doctor that you want.

The Berlin Tuberculosis Congress was opened on Wednesday, May 24th, in the presence of its patroness the Empress Augusta Victoria.

The Principles on which the Legislative Right to Control the Practice of Medicine is Based.—*The Journal of the American Medical Association* for April 29th

says that in the recently reported case of the regular State Board of Medical Examiners *vs.* Fowler, the supreme court of Louisiana lays down a number of propositions of general interest. It holds that whenever the pursuit of any particular occupation or profession requires, for the protection of the lives or health of the general public, skill, knowledge, and other personal attributes or characteristics in the person pursuing it, the general assembly has the power and authority to have recourse to proper measures to insure that none but persons possessing these qualifications shall pursue it, and that a statute to that effect is not open to attack as depriving citizens of their right to earn a living. The right to practise medicine, it declares, is not an absolute natural right, but a right or privilege to be exercised under conditions and limitations regulated by legislative authority. Since the general assembly has the authority to require, as a condition precedent to the right or privilege of any one to practise medicine in Louisiana, that he should be subjected, before doing so, to an examination as to his qualifications, and be found and declared worthy and qualified, it has also the right to select the particular agency to whom should be delegated that duty. Courts can not control that selection. A statute creating a board of medical examiners, to be composed of physicians recommended for appointment from lists to be furnished by the Louisiana Medical Society and the Hahnemann State Medical Society, to be appointed by the governor on such recommendation, is not open to attack as discriminating in favor of the regular and homeopathic schools against the eclectic school of medicine. No constitutional right is given to particular individuals entertaining peculiar theories of medicine to group themselves together and, calling themselves a special school of medicine under a selected name, to insist that they be recognized and dealt with as such. The action of the medical board of examiners is not conclusive, but is subject to correction in case of abuse. The recognition by the constituted authorities of another State that a person was properly qualified to practise medicine, and that the medical college whose diploma he presents as evidence of the fact was a medical college in good standing, does not carry with it a vested right in the party to practise medicine in Louisiana. Each State acts independently of the other in this matter. Nor is a person who has been practising medicine as a physician for a number of years, without objection, exempt from complying with legislation of a later date, making it a condition precedent to any one's practising medicine that he should have been examined by a medical examining board found to have the qualifications required by law for so doing.

The American Electro-therapeutic Association will hold its ninth annual meeting in Washington on September 19th, 20th, and 21st under the presidency of Dr. F. B. Bishop, of Washington.

Death of Dr. Büchner.—We learn from *Science* for May 12th of the death of Dr. Friedrich Karl Christian Ludwig Büchner, who was born in 1824, and after practising medicine became docent at Tübingen, from which position he was dismissed in consequence of the materialistic doctrines in his book on *Matter and Force*, published in 1865. Thereafter he practised medicine at Darmstadt. Büchner was well known for his series of popular works on physical science and the theory of evolution, as well as for numerous contributions to physiology, pathology, and other sciences.

Original Communications.

THE PRESIDENT'S ANNUAL ADDRESS
TO
THE AMERICAN MEDICAL ASSOCIATION.

By JOSEPH M. MATHEWS, M. D.,
LOUISVILLE.

MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION, LADIES, AND GENTLEMEN: In assuming the duties of the presiding officer of this association, I must confess that it is with a feeling of great diffidence. For many years I sat at the feet of the masters in medicine, as they were wont to assemble at their annual meeting, and was content to listen only to their wise counsels, to emulate as far as I could their example, and to profit by the words of wisdom which fell from their lips. When I reflect upon the names of my predecessors who have occupied this chair, their great achievements in medicine, the high rank to which they attained, and the good which they accomplished, it is no wonder that I assume the rôle with some trepidation. You will therefore permit me to offer you my very sincere thanks for the honor which you have conferred upon me.

In assuming the duties as your chairman, I hope to be just to all, and if at any time my decisions should appear otherwise, please attribute it to my head rather than my heart. It pains me to look over this great body and recognize the fact not only that many of its most prominent members in the past are absent, but also that the majority of those who have served you as president have also gone to their eternal home. Let their departure remind us that we, too, must soon lay aside our armor and join the silent majority. This thought brings me to consider for a moment:

OUR NATIONAL BODY: ITS PURPOSES AND DESTINY.
—I imagine that when the father of this association, the Nestor of American medicine, called around him a few devoted friends, accomplished physicians and surgeons, and effected an organization to be known as the American Medical Association, the first thought which filled their minds was the unification of the profession which they loved so dearly. It was their desire, no doubt, to bring together each year the men who were laboring earnestly and honestly for the elevation of the profession, that they in conclave could impart to each other the advance that each succeeding year had brought forth in their chosen calling, and this done in order that the sick and afflicted could be profited thereby.

Sacrifices and great personal discomfort were endured by them to obtain the good; but what splendid results were accomplished by their efforts is evidenced in the assembling of this great body here to-day. I opine, too, that anything that partook of the nature of

jealousy, unfairness, or politics was deprecated by them, but, to the contrary, they desired that peace and goodwill should always obtain. What could be more beautiful than the fruition of this hope? How grand the thought that here in the mother society men of all grades, so far as education and accomplishments are concerned, be they great or small, poor or rich, the rank and file of the profession, can meet on common ground and exchange views for the benefit of suffering humanity! Some must be teachers or instructors, others listeners; they each in their way contribute their mite. It may be that some member from a far-off and sparsely settled country has heard some truth by the application of which a life may be saved, or in return he can give an experience which may prove of incalculable benefit to his more fortunate brother. Let me impress upon you, then, that no class legislation should be indulged in by this body. Let it not be said of us that we rule without reason, or that we are a set of politicians trying to secure benefit for the few against the many, or for the many against the few, for in no wise are we a legislative body. In lieu of all this, let us receive with open arms all who represent honesty and fair dealing and entertain an earnest desire to elevate the standard of the medical profession and of this association. Let no wrangling come into our midst, but rather let peace and harmony prevail, with love to one another, as becomes gentlemen.

SHALL WE HAVE A LOCAL HABITATION?—It is to be seriously questioned whether this association, so numerically great as it is destined to be, or in truth is now, profits in any manner by its migration each year to distant parts of the Union. It can not be denied that a mistake has been made in the past in going to cities too small to entertain it. It certainly adds no dignity to this distinguished body to be thus traveling about, not to speak of the inconvenience occasioned to the majority of its members by so doing. Nor is it right or proper to impose upon a local profession the expense and trouble that it takes to entertain it. If the members will give the subject careful thought and consideration, I believe that they will come to the conclusion that the association should have a local habitation. The natural question would then be, Where could such habitation be found? In the selection of the same, many things would have to be considered. A city within easy reach, which offered the most attractive advantages. Of all, the city of Washington is the best suited. The capital of the nation, it has advantages that no other place can offer. With its great free libraries, it is the seat of learning; its magnificent government buildings, its natural beauty, its select society, its two houses of congress, the rendezvous of foreign representatives and diplomats, the home of the medical departments of the government, army, navy, and Marine Hospital corps. Then, too, the idea is not far fetched that the gov-

ernment, liberal always, would at some time lend the association a helping hand in the way of securing a suitable building in which to hold its meetings and of which to become the owner. Again, it would be in touch with the legislative department of the government, and it can readily be seen of what value this would be in securing much-needed reforms in a medical way. The *Journal* would here find the most suitable of all abodes: an atmosphere of refinement, education, and wealth. Its editor would all the time be on the alert, and much profit would come to the *Journal* from such surroundings and associations. I beg of you to give this matter your most serious consideration.

IMPORTANCE OF ATTENDING THE LAST DAY'S SESSION.—I desire to call your attention to the importance of attending the general session on the last day of the meeting. Business of the very greatest importance always comes up for consideration on that day, and, strange to say, often there is scarcely a quorum present. At the meeting at Denver last year fewer than fifty members were in attendance on the last day of the meeting. If, therefore, resolutions are rushed through on that day which displease you, it is your own fault. Besides, if the business transacted on that day comes up for consideration at the following annual meeting, it takes up time which it has no right to. Please, therefore, see to it that nothing interferes with your attendance on that day.

CLINICS, DINNERS, ETC.—It has been a noticeable fact for a long time that the clinics which are held each year during the meeting of the association, by the local profession of the city in which it happens to meet, very materially decrease the attendance at both the general sessions and those of the various sections. This should not be, and it is the duty of the proper officials of this association to deprecate the holding of such clinics. Time and again many of the very best men of the association have been kept away half a day, and often a whole day, from the meeting, when their counsel and presence were much needed at the different sections or at the meeting in general session. Need I remind you that absence of the same kind and duration is often occasioned by dinners to which the members are kindly invited? This can easily be obviated.

THE JOURNAL.—It is my painful duty to announce to you the death of Dr. John B. Hamilton, editor of the *Journal* of the association. This association never had a truer friend than he. Possessed of a clear-cut individuality, he was always outspoken, and what he did he at least believed to be for the best. We shall miss his wise counsel in our deliberations. He made a most excellent editor of the *Journal*, and by his efforts it was brought up to the high standard which it occupies to-day. The board of trustees of the *Journal*, after careful consideration and deliberation, has selected Dr. George H. Simmons to succeed Dr. Hamilton as editor. You are to be congratulated upon this wise selection. Dr.

Simmons is not an experiment, for he has won his laurels in medical journalism, and already stands among his editorial friends as the peer of any. Having come up from the ranks in journalism, he is acquainted with every detail, and that he will make a good editor goes without the saying.

The Management of the Journal.—I trust that it will not be considered out of place if I make a suggestion or two in regard to the management of the *Journal*. It has been frequently urged that much appears in it that should be expurgated. In other words, that a censorship should be established and many articles withheld from publication. I desire to dissent from this sentiment entirely and unequivocally. The *Journal* is simply the mouthpiece of the association, and if one single paper read before this body is to be refused publication, then you have violated your pledge and obligation. Any member has the inalienable right to disagree with the sentiment of any paper, and the editor is in no wise responsible for said sentiment. If a paper is good enough to be read before any section in this association, it is good enough to be published in the *Journal*. If any action is taken, it should be by the chairman of the section before which the paper is to be read, saying to the reader that his paper does not come up to the standard. But who will assume this responsibility? and who is to judge the judges? May it not be that a paper, although couched in bad English, might contain matter of real merit? Many articles, too, with high-sounding titles and verbiage beyond the comprehension of man may contain but little that is of worth, although written in perfect English, with deductions that would puzzle a philosopher, and which contain illustrations that would do credit to *Puck*. By all means let the editor improve the *Journal* in any way that he deems proper, but let every paper read before this association or its sections be published in the *Journal*. Let the reader select the wheat from the chaff, the good from the bad. In connection with the business interests of the *Journal*, I beg to make the following suggestion: Let a suitable man be selected, preferably a doctor, to travel in its interest, thereby increasing the membership of the association; this agent, secretary, assistant secretary, or whatever you may choose to call him, to solicit subscriptions for the *Journal* and encourage membership. He should visit the meeting of each State, district, and county society, besides calling on individual members of the profession. Of course, only those who are indorsed by accepted or recognized organizations can become members of this association. There are many hundreds of worthy physicians in the United States who would readily join the mother society if properly approached. Many, very many of them are ignorant of the manner of becoming members. It may be urged that the salary necessary to secure such an agent would be too large to justify the employment of such. In refutation I would urge that by such individual solicitation

many more would be added to the membership than would be necessary to pay said salary, and they would become permanent members. It can be said, especially to young men, that the mere wearing of the button of the association adds dignity and confidence. Then, too, it can truthfully be asserted that the *Journal* alone is worth more than the sum paid for membership. By this means I am sure that the treasury would be so increased as to enable the *Journal* to be the peer of any published. Besides, our ranks would be so increased as to make this association not only the largest but the most important in all the world.

THE SECRETARYSHIP.—For several years there has been a heated debate, if not wrangle, at each annual meeting, in general session, over the secretaryship. This is both unseemly and undignified, and is much to be deplored. It seems to me that there is an easy solution to this matter. Let the editor of your *Journal* be the secretary of the association. The board of trustees has wisely insisted that he devote his whole time to the *Journal*. It does, therefore, appear that the secretaryship should be one of his duties. By so acting he is brought into a closer relation with the business management of the association and with the active membership of the same. He would himself be responsible for a correct report of all proceedings, and be enabled to keep them without fault. The question whether or not any addition should be made to his salary for this additional work can be determined by the board of trustees. Our present secretary has served us long and well, and for his services in the past the association should, and no doubt does, feel deeply obligated to him. I am sure that he would be the first one to acquiesce in any move that would enhance the business interests or the prosperity of the association. I therefore very respectfully offer the suggestion as above stated.

SOCIETIES WHICH SHOULD BE RECOGNIZED.—In the last few months many good medical societies which have adopted the code of ethics have communicated with me, through their secretaries, asking how they could get recognition by this body. I have found, in many instances, that the State society had failed to recommend them, but for no particular reason. Anyway, they are debarred from recognition by this association. In several instances I found that said societies had a greater number in attendance at their meetings than did the State society. I trust that something will be done in regard to this matter, in order that these good societies can obtain recognition from this association.

The appointment by your nominating committee of three such distinguished gentlemen to read the several addresses before this association in general session assembled relieves me of any duty in that line. I shall therefore content myself with employing the balance of my time in asking your consideration of a few things which are a menace not only to the public health, but also to the safety of society. Having served as a health

officer for many years, my mind naturally turns into this channel, especially so when I see an opportunity to enlist the interest and co-operation of this large and influential body of physicians.

TUBERCULOSIS.—It behooves this national body of American physicians to take some action, or at least to approve the movement, to stamp out, as far as scientific effort can do so, that dread disease that kills one seventh of the world's population—tuberculosis. A few days ago, May 24th to 27th, there was held a tuberculosis congress in Berlin, international in character. The Liverpool Medical Institution, one of the most important medical societies in England, has recently appointed a committee of its members "to consider what further steps can be taken for the prevention of tuberculosis, and for the treatment of this disease in the human subject." This committee propose to consider (1) the nature of pulmonary tuberculosis, its communicability and preventability; (2) the provision of sanatoria; (3) the more effectual methods of controlling spread of infection; and (4) the desirability of adopting some form of notification. The eradication of bovine tuberculosis received a powerful stimulus throughout the empire when recently Her Majesty the Queen gave orders to have killed such of her herd of Jerseys as were shown by the tuberculin test to be infected.

At the recent meeting of the French Association for the Advancement of Science, the Section of Hygiene, at the suggestion of Professor Nicholas, passed a resolution pointing out that the convection of tuberculosis by inhalation was only one of the modes of infection, and that a larger part of the diffusion of the disease was played by contagion through the alimentary canal, as proved experimentally and clinically, urging the necessity of taking adequate measures to insure the sterilization and harmlessness of articles of food. All Europe is wide awake to the importance of this subject.

From carefully prepared statistics it is found that of the deaths from all causes between the ages of fifteen and sixty years, one third of the number are victims of tuberculosis, and that it kills four and a half times as many people as do small-pox, scarlet fever, typhoid fever, and diphtheria combined. It is estimated that at any given time in Germany alone 1,300,000 persons are affected with tuberculosis, and Osler says that 1,200,000 in America have the disease at all times. One in every fifty persons has the disease. Over 13,000 die of tuberculosis in the State of New York every year. In every American city the proportion of deaths is equally great. So important has this subject become that at a recent convention held in England to consider the question, "How to Prevent the Spread of Consumption," the Crown was represented by His Royal Highness the Prince of Wales, who presided over the meeting. Great encouragement was given the move by royalty and all others. The medical pro-

fession all over the world is deeply interested in the subject, the aid of governments is solicited, and every effort is being made to suppress this formidable disease. Since the germ which causes it is known, and its habitat, the condition under which it thrives, and it is known also that the disease is contagious, it does appear but rational to assume not only that it can be prevented by precautionary measures, but that it can be cured by proper environment and treatment. It is equally true that, even in the best of homes, the treatment usually accorded the patient is *nil* in effect and accomplishes nothing. Something more than this must be done if we expect to decrease the death-rate materially. What is that something? Detweiler believes that over twenty-four per cent. of cases of tuberculosis are curable; Meisen, twenty-seven per cent.; Braymer, twenty-one and a half per cent. And this under ordinary climatic and hygienic treatment. A much higher percentage of recoveries could be recorded if a real systematic and scientific treatment could be afforded these patients. Such a course can be instituted only in well-ordered and equipped hospitals designed especially for such inmates. In regard to the extent of the disease, I can do no better than to use the words of Professor Hirsch. He says: "It is emphatically a disease at all times, all countries, and all races. No climate, no latitude, no occupation, no combination of favoring circumstances forms an infallible safeguard against the onset of tuberculosis, however such conditions may mitigate its ravages or retard its progress. Like typhoid fever, phthisis dogs the steps of man wherever he may be found, and claims its victims among every age, class, and race." In answer to the question, What is to be done to prevent its progress? I would suggest a remedy in using the words of a resolution adopted at the International Congress of Hygiene in Brussels, in 1897: "The hospitalization of tuberculosis is urgent and will not long be withheld." In several large cities in the United States an earnest effort has already been made to carry this thought into practical utilization, especially in Chicago and New York. It can readily be seen, however, that but a comparative few out of this great number of afflicted can be accommodated in this manner. A country or State that is ever on the alert to prevent the landing of a foreign foe or a hostile army surely should ever be ready to aid in the suppression of a foe to the human race ten times more destructive to human life than the invasion of the country by an army of great size armed with the most improved rifles. Let us, then, in the name of humanity, invoke aid from the government of this very humane people, in order to help put down and thoroughly conquer this foe.

During the last session of the New York legislature a report of the senate committee appointed to investigate the advisability of establishing a State hospital for the cure of consumptives was made. Many reasons for the same were presented in the report. Among

other things, the report read: "Tuberculosis is one of the most fatal diseases that the human race has to combat at the present day; its yearly victims inflict a serious and unnecessary drain upon the resources of the State. Unnecessary because it is now demonstrated beyond question that by the adoption of proper preventive measures a large proportion of those who suffer from this disease may be saved. This is proved not only by the revelations of science but by the results which have been obtained in the practical application of the means to prevent the spread of the disease. A large proportion of the cases brought under treatment have been cured, and so many have so improved as to be restored to the producing class. It is also shown that the efforts of the boards of health in this and other States, as well as in other countries, have so far succeeded in reducing the percentage of deaths from tuberculosis by the measures adopted that there is good ground for assuming that with wise laws properly enforced this disease may be almost wholly obliterated." Is it too much, then, to suggest that this association, representing the most advanced thought of the medical profession of America, take action in this important matter? I would most respectfully urge you to appoint a committee to prepare a careful report on this subject and present it to the next congress sitting, beseeching that this government erect, prepare, or donate hospitals or reservations in and at which the poor or others shall receive treatment for the cure of consumption. Also that it be impressed upon State boards of health in the various States the advisability of the respective States erecting similar institutions. The blind, the deaf, the insane, the feeble-minded, and other classes are so provided for; why not these? They are not able to care for themselves, and they are a menace to the public health. It must be confessed that, in so far as the prevention of the disease is concerned, that must come from the education of the people to the facts. The best way to accomplish this I leave to you.

THE ANTIVACCINATIONISTS.—It may appear superfluous to ask that you consider in the proper way a rebuke to a certain class that is doing much to endanger the lives of our citizens, and whose meddling ways are giving the health boards of the various States much annoyance. I allude to the antivaccinationists, encouraged as they are by an Antivaccination Society. It seems strange and beyond belief that citizens of respectability and supposed intelligence should band themselves together to prevent a means of saving human life, but "'tis true, and pity 'tis, 'tis true." If these misguided people would only inform themselves of facts, patent to every reader of history, they might at least stop long enough in their mad career to think.

The true condition is so well described by Dr. Seys in a recent paper that I beg to quote from him: "Well has small-pox been termed 'the most terrible of all the ministers of death.' It dates back to the early history

of our race, but from whence it came no man can say. Then all expected to have it, and but few escaped. No respecter of persons, it was found in the palace and in the hovel, in the fair green fields and in the foul dungeon. All ages yielded to its noisome touch, and no season of the year was free from its deadly breath. One third of all children born to the daughters of men died before they were a year old because of this pestilence, and one half before the age of five. In epidemic years it is estimated to have caused fifty per cent. of all deaths in Europe, and in non-epidemic years not less than ten per cent. Two thirds of the pauper blind in Europe of that day looked no more on the faces of their loved ones or the blue sky, nor saw the light of day, because of its blighting visitation. In Mexico it is said in a few years to have caused the death of three million and a half of people. Iceland and Greenland were almost depopulated by it, and it has well-nigh rendered extinct some of our Indian tribes. It was the all-important factor in keeping down the population of Europe. Nor would the task be a difficult one to-day, should we desire to do so, to bring back the horrors of but a few years ago."

We may rest in peace and disregard the efforts of these half-mad people, but we must not close our eyes to the fact that, by their loud cry, aided by political influence given often for self-aggrandizement, they are endangering the lives in every community. So far has this thing gone that the vaccination law in England has but recently been amended, so that only those who may desire shall be vaccinated. This is a menace to the public health and smacks of the Dark Ages. I again respectfully ask that you give to the medical profession in America an indorsement of their views in a resolution sustaining *compulsory* vaccination. The safety of the people from this most direful malady demands it.

A CRUSADE AGAINST SYPHILIS.—An international medical conference will be held at Brussels, Belgium, in the month of September next, known as The International Conference for the Prevention of Syphilis. A statement of this fact has been sent the honorable secretary of state of the United States, through the Belgian minister at Washington, with a request that he appoint a delegation to attend this important conference. The honorable secretary, in turn, requested me, as your presiding officer, to name said delegation. This I have already done, as the call was for immediate action. In the preamble which accompanies this notice the following language is used: "The increasing propagation of syphilis and venereal diseases has become a serious danger to society, and it is important while there is still time to take efficient measures to stop the progress of this scourge. The spread of the evil is an uncontrollable fact; on this point all physicians who are in a position to know or observe its progress are agreed. The number of victims increases daily, and a serious

consideration is that this malady is penetrating into strata of society where it was formerly rarely seen. Scarcely any attempt hitherto has been made to check this social evil, or, rather, while some attempts have been made, without concerted action, without preconceived plans, and without an international understanding to success."

What can be said of Belgium in this regard can be said of the United States. Perhaps the ratio of cases is not so large, but this matters little. It is estimated that there are in this country between six and seven million people who are afflicted in one way or another with syphilis. A distinguished French authority says that one man in every four has the disease in France. When we consider that by this the very foundation of society is shaken, our families are imperiled, the constitutions of our youths undermined, our women wrecked, it is high time, as this official says, that we turn our attention to the subject. The warning should be in words that the most illiterate man or woman could understand, and it should emanate from sources and places that would reach the greatest number. Our false modesty in the past has been too pronounced, and has prevented us from giving to the common people valuable information; so we are in a measure, as a profession, much to blame for the great spread of this blighting curse.

The time has arrived when we as physicians, singly or when in convention assembled, should throw aside all restraint when dealing with this vital question. Fathers, mothers, sisters, brothers, and all others should be informed, and this information should be in the plainest language. The minister and the priest should aid the doctor in this praiseworthy undertaking. The doctrine should be inculcated into the young of both sexes that freedom from this awful condition should exist before the marriage relation is thought of. Upon this declaration rests the hope of the State, as well as of families, for neither good soldiers, good citizens, nor good husbands with tainted blood can be had. Please permit me to suggest that a committee be appointed from this body, to report at the next annual meeting, on the subject: What is the Best Means of Preventing the Spread of Syphilis?

A PLEA FOR HARMONY.—In conclusion, let me beg of you that this meeting be one of perfect harmony and peace. Let nothing of an acrimonious nature be indulged in, but rather let your deliberations be characterized by patience, love for each other, and a desire to ennoble the profession to which you belong. For are we not brothers indeed, fellow-workers for a common cause—the obliteration of the common enemy, disease? May your future life, each and all of you, be one of peace and perfect happiness; and may God grant to all a long life filled with good deeds. If fate should decree that any one of you should pass away before we meet again, may you find eternal rest in "God's next country."

SANITARY LESSONS OF THE WAR.*

BY GEORGE M. STERNBERG, M.D., LL.D.,
SURGEON-GENERAL, U. S. ARMY.

As compared with the civil war and with other great wars during the present century, the mortality from wounds and disease among our troops during the war with Spain has been low. Our wounded have, to a large extent, had the advantage of prompt treatment with antiseptic dressings, and a very considerable proportion of those who were not killed outright have recovered without any mutilating operation or septic complication. The mortality from disease has also been comparatively low; but, unfortunately, during the first months of the war, that scourge of new levies of troops, typhoid fever, prevailed in many of our camps and claimed numerous victims. It is well known to sanitarians and military surgeons that, as a general rule, more soldiers succumb to disease than are killed by the bullets of the enemy, and our recent war has not been an exception in this regard. The total number of deaths reported in our enlarged army, including regulars and volunteers, from May 1, 1898, to April 30, 1899, is 6,406. Of these, 5,438 died of disease and 968 were killed in battle or died of wounds, injuries, or accident. During the civil war the number of deaths from disease was 186,216.† The number who were killed in battle or died of wounds was 93,969, or about one half of the deaths from disease. The total deaths from disease in the Union armies from the commencement of the war to the 31st of December, 1862, was 34,326, and in the Confederate armies during the same period, 31,238.

The following table gives the monthly death-rates from disease in our armies from May 1, 1898, to April 30, 1899, and, for comparison, the rates for the same period during the first twelve months of the civil war:

Comparison of Monthly Death-Rates (per 1,000) from Disease.

MONTHS.	1861-'62.		Ratio per 1,000 of M. S.		1898-'99.		Mean strength.
	Mean strength.	Number of deaths.	Ratio per 1,000 of M. S.	Ratio per 1,000 of M. S.	Number of deaths.	Ratio per 1,000 of M. S.	
May.....	16,161	18	1.11	.26	42	163,726	
June.....	65,950	55	.82	.44	90	202,526	
July.....	71,125	106	1.49	1.72	451	262,613	
August....	112,359	242	2.15	5.21	1,400	268,697	
September..	165,126	365	2.21	5.89	1,541	261,824	
October....	256,884	725	2.82	3.17	809	255,060	
November... 301,848	1,145	3.79	1.51	365	242,000		
December.. 343,181	1,471	4.29	.84	201	240,000		
January.... 352,760	1,593	4.52	.85	180	211,000		
February... 327,734	1,346	4.11	.87	156	180,000		
March..... 328,878	1,575	4.79	.90	123	136,000		
April..... 410,416	1,881	4.58	.71	80	112,000		
Annual...	229,452	10,522	45.86	25.73	5,438	211,350	

* Abstract of a paper read at the meeting of the American Medical Association, at Columbus, Ohio, June 8, 1899.

† In addition to this, 24,184 deaths are recorded as from unknown causes, and probably most of these deaths were from disease.

In comparing the death-rates from disease during the year of the Spanish-American War (May 1, 1898, to April 30, 1899) and the first year of the civil war (May 1, 1861, to April 30, 1862) note should be taken in the first place that the mean strength in May, 1861, was only 16,161 as compared with 163,726 men in service in May, 1898. The mustering in of volunteer troops progressed more slowly in 1861 than during the recent war, so that it was not until September and October, 1861, that the mean strength assumed proportions equal to that of the months of the Spanish war. Although the number present in the camps of 1861-'62, after October, 1861, was largely in excess of those aggregated during the past year, the average annual strength during both wars did not differ greatly. Nevertheless, the deaths from disease in 1861-'62 numbered 10,522, while in 1898-'99 they amounted only to 5,438. The death-rate to the thousand of strength mounted gradually month by month in 1861-'62, and indeed it did not reach its acme until February, 1863, when the rate of 6.39 was reached. In 1898, on the other hand, the acme, 5.89, was reached suddenly in September, but, owing to the sanitary measures adopted, the fall during October and November was as rapid as had been the rise.

The same gradual rise is seen in the mortality statistics of typhoid fever during the civil war. The highest death-rate, 2.81, was not reached until May, 1862, the thirteenth month of the aggregation of the troops, when 1,092 men died of this disease, and the fall of the rates was as gradual as the rise. On the other hand, the rise in 1898 was sudden, the maximum rate, 3.57, being reached in September, when 933 men died of this disease; but the fall during the months of October and November was as notable as the rise. This sudden suppression of the disease can not be attributed to an exhaustion of the susceptibility of the troops to attack from this fever, as they only suffered at the rate of 12.37 to the thousand of strength during the twelve months, whereas the troops of the civil war suffered at the rate of 19.71 to the thousand. It can be attributed only to the active preventive measures that were instituted, and especially to moving the troops to fresh camp sites and to the greater care exercised in the disposal of excreta.

The following chart shows by the graphic method the same comparison as is given in the above table. The notable rise in the general death-rate from disease and in that from typhoid fever alone, which occurred in August and September, was undoubtedly due to the insanitary conditions resulting from the hasty assembling of large bodies of undisciplined troops in our camps of instruction.

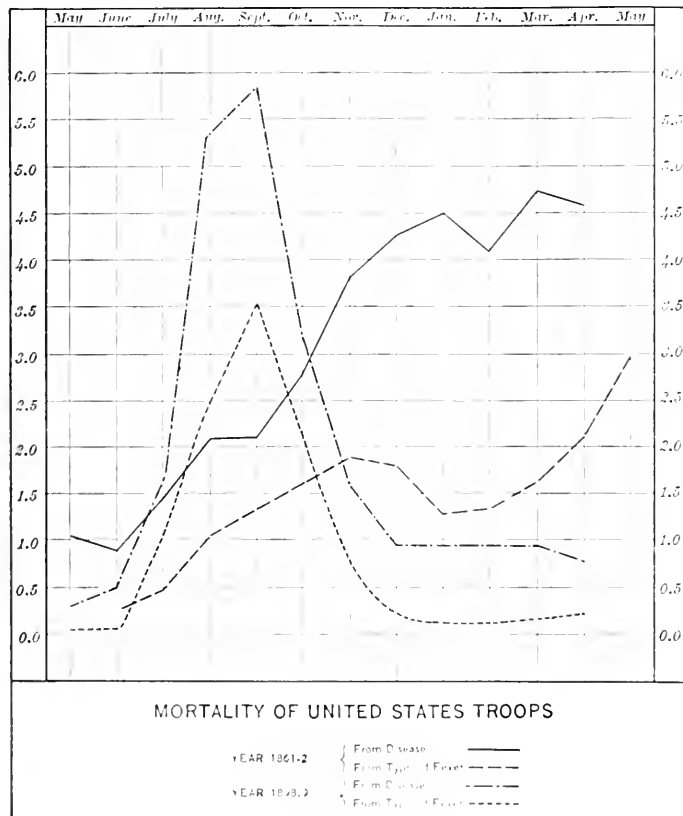
The average annual mortality from typhoid fever in our regular army since the civil war has been: for the first decade (1868-'77), 95 per 100,000 of mean strength (.95 per 1,000); for the second decade (1878-'87), 108

per 100,000; for the third decade (1888-'97), 55 per 100,000. This latter rate compares favorably with that of many of our principal cities. For example, it is exceeded by the typhoid death-rate in the city of Wash-

ington in 1887 to 55 per 100,000 in the decade ending in 1897. Hygiene is made one of the principal subjects of examination for candidates desiring appointment in the medical corps of the army, and at subsequent examinations

for promotion to the grades of captain and major is given a most prominent place. It is also the most prominent subject in the course of instruction at the army medical school, where the student-officers spend five hours daily for a period of five months in practical laboratory work relating for the most part to the cause and prevention of infectious diseases. It should be remembered, however, that the army medical school was not established until the year 1893, and consequently but a small proportion of the medical officers of the army have had the advantage of this course of instruction.

But the comparatively small number of medical officers of the regular army available for duty in the large camps occupied by our volunteer troops at the outset of the war proved to be entirely inadequate to control the sanitary situation in these camps, and as a result of the conditions existing the mortality from typhoid fever in our armies during the year ending April 30, 1899, has been more than twenty-two times as



ington, which is 78.1 per 100,000 (average of ten years, 1888-'97); by that of the city of Chicago, which is 61.1 per 100,000; by that of Pittsburgh, which is 88 per 100,000. These figures, however, do not show the entire mortality in the cities mentioned as a result of typhoid fever, for without doubt many of the deaths ascribed to "malarial fevers" were in fact due to typhoid infection.

It will be seen that sanitary conditions at our military posts in time of peace, as judged by the typhoid death-rate, compare favorably with those in our large cities in various parts of the country. As a matter of fact, great attention has been given to post sanitation for many years past, and through the persistent efforts of officers of the medical department great improvements have been made, especially during the past ten years. The result is shown in a reduction of the typhoid mortality from 108 per 100,000 in the ten years ending

great as the annual mortality in our regular army during the decade immediately preceding the war period. As compared with the first year of the civil war, however, there is a decided improvement, the typhoid mortality for the first year of the civil war having been 1,971 per 100,000 of mean strength, and for the Spanish-American war 1,237 per 100,000. Moreover, as shown by the chart, the vigorous sanitary measures enforced enabled our troops to quickly free themselves from the ravages of this infectious disease, and, while the line of typhoid mortality continued to ascend during the first year of the civil war and subsequently, it rapidly fell after the middle of September last, and for the last six months of the period under consideration has been remarkably low. Indeed, in the history of large armies the record has never heretofore been equaled.

[General Sternberg then quoted from his own prize

essay on *Disinfection and Personal Prophylaxis in Infectious Diseases* and from the *Manual for the Medical Department* as to the proper measures to be taken for the disinfection of excreta, soiled bed linen, underclothing, etc.; and further reproduced Circular No. 1, issued from the surgeon-general's office at Washington on April 25th, and summarized in the *New York Medical Journal* for August 20, 1898, giving the most explicit sanitary instructions to medical officers as to sinks, kitchen refuse, fluids to drink, isolation of infectious cases, sanitary policing, avoidance of marches during the heat of the day, use of fruit and quinine, and proper underclothing. Circular No. 5, dated August 8, 1898, calling renewed attention to Circular No. 1 and enforcing its provisions, and Circular No. 7, dated September 5, 1898, calling attention to the paragraphs relating to the disinfection of excreta from the *Manual for the Medical Department*, were also quoted.]

The reasons are apparent, and even in the light of our recent experience I am not sure that under similar conditions we could avoid similar results. Sanitarians generally are familiar with the difficulties attending their efforts to restrict the ravages of infectious diseases in towns and cities. They have to contend with the ignorance and reckless indifference of a large proportion of the population, with the ignorance and mistaken parsimony of legislative bodies, and to some extent with the negligence or perfunctory performance of duties assigned to them by agents of the health department, often appointed as a reward for political services rather than on account of their special fitness for the work. Perhaps it was too much to expect that typhoid fever should be excluded from our camps, unprovided with sewers and occupied by new levies of troops, having for the most part inexperienced officers both of the line and in the staff departments. The medical officers of regiments were appointed by the governors of States, and, as a rule, were competent professionally, but they were called upon to assume new responsibilities for which they had no special training. Unfortunately, hygiene and practical sanitation are subjects which receive little attention in our medical schools or from physicians and surgeons engaged in the practice of medicine. But even in those cases in which the regimental surgeon was fully aware of the importance of camp sanitation and urgent in his sanitary recommendations, he was unable to control the sanitary situation unless the regimental and company officers enforced the necessary measures for protecting the health of the command. And just here is the fundamental difficulty when we are dealing with new levies of troops. The officers and enlisted men of our volunteer regiments were, as a rule, intelligent, patriotic, and brave, but they were not disciplined. Each man was in the habit of judging for himself and of acting in accordance with his individual judgment. Discipline consists essentially in an unquestioning obedience to orders from those

having proper authority to give them. Trained officers can not at once establish discipline among untrained troops, and when both officers and enlisted men are without military experience, it is evident that, with the best material, time will be required for the establishment of discipline. And in the absence of discipline it is impracticable to enforce proper sanitary regulations in camp. The surgeon-general may formulate sanitary regulations, and the general commanding an army corps or a division may issue the necessary orders, but in the absence of discipline these orders will not be enforced. A reckless recruit *will* drink the water which has been condemned as unsafe, and at night *will* defile the ground in the vicinity of his tent rather than visit the company sink, which, possibly, is in a disgusting and unsanitary condition because of a failure to carry out the orders to cover the surface of excreta "with fresh earth, or quicklime, or ashes, three times a day."

And now, in order that the "sanitary lessons of the war" may not be lost sight of, and may be made available hereafter if we should again have occasion to assemble a large army on short notice, I consider it my duty to speak plainly with reference to one of the principal causes of the epidemic prevalence of typhoid fever in our camps. As a rule, this disease was called by some other name by the medical officers on duty with regiments who first saw the cases. Usually it was assumed to be malarial fever, and was treated as such until the patient became so sick that it was found necessary to send him to the division field hospital or to a general hospital. This general statement is based upon the carefully made investigations of a board of medical officers appointed upon my recommendation.

In a paper read by Major Victor C. Vaughan at the meeting of the Association of American Physicians, held in Washington city early in May, which paper may be regarded as a preliminary report of the board, the following statements are made:

"We had not finished our first day's work at Camp Alger before we saw that one factor in the problem must be thoroughly dealt with before we could hope to reach a satisfactory solution. Fortunately, we promptly took steps to acquaint ourselves with this factor. It can not be denied that scientific medicine would have gained much had this factor been provided for at an earlier date. I refer to the question of the scientific diagnosis of typhoid fever. In the division hospital at Camp Alger we found most of the febrile cases diagnosed as malarial. We believed that they were typhoid fever, but the surgeon in charge had diagnosed them malarial. We requested that competent men, properly equipped for making blood examinations for the malarial plasmodium and the Widal test, should be sent to each of the larger camps. The surgeon-general acted promptly on this suggestion.

"When we began to study the regimental sick reports we found that, in order to obtain satisfactory in-

formation, we must endeavor to ascertain how many cases of typhoid fever there were in each regiment, and it soon became evident that the regimental sick reports did not give this information. Of two regiments in the same brigade, one had more than two hundred cases of typhoid fever, as shown by the regimental reports, while the other regiment on like evidence had only two cases; but the records of the second regiment show more than two hundred cases of protracted malaria, and these furnished a mortality as high as that of the typhoid fever in the first regiment. For the reasons already given, we have included all the protracted malarias among our list of the typhoids. It may be asked how long we have considered it necessary for a so-called malaria to run in order to make it a probable typhoid. In answer to this I will state that we have regarded all so-called malarias of ten days or more in duration as possible cases of typhoid fever. We think that the great rarity of true malaria, and the readiness with which these rare cases have yielded to quinine, and the fact that quinine was so generally administered, justifies us in this conclusion. Practically, however, the number of doubtful cases is exceedingly small.

"Typhoid fever was not only diagnosed as malaria, but it was covered up by many other names. In one regiment the death-rate from indigestion amounted to fifteen per cent. of the completed cases. In another regiment at Chickamauga dengue is a frequent diagnosis of many cases which undoubtedly were typhoid fever. . . ."

This failure to recognize typhoid fever during its earlier stages is an error of diagnosis which was made on a very extensive scale during the civil war, has been made on an equally extensive scale by surgeons of the British army on duty with troops in India, and is still being made by a majority of the practitioners of medicine in certain parts of our own country.

[The surgeon-general then made extensive quotations from his own work on *Malaria and Malarial Diseases*; from Dr. George B. Wood's *Practice of Medicine* (ninth edition); Dr. James C. Wilson's *Treatise on the Continued Fevers*; Dr. W. W. Johnston's paper (*American Journal of the Medical Sciences*, October, 1882) On the Mild Forms of Continued Fever which Prevail in Washington; Sir Joseph Fayrer's recent work on *Fever in India*; and from Professor Borelli's articles (*Medical Times and Gazette*, London, July 8, 1876) on Naples Fever, all tending to substantiate the thesis that the mistaken diagnosis of typhoid fever as malarial fevers of various kinds prevailed very widely, though not more, perhaps, in this country than in continental Europe and British India. The great difficulty of forming an early correct diagnosis from clinical symptoms was emphasized; inasmuch as while remittent fevers frequently assumed in their later stages a continued form, and malarial fevers of a remittent or continued type often gave rise to a "typhoid condition," typhoid

fever, on the other hand, frequently showed a decided remittent character during the first week quite independently of any malarial complication, and still more so when occurring in a malarious subject. The error in diagnosis once made might be persisted in in the later stages, either under the continued influence of the preconceived and dominant idea, or from the reluctance to confess to an error.]

Finally, the principal lessons to be derived from our recent experience may be stated as follows:

A trained medical corps, hardly adequate for an army of twenty-five thousand men, can not control the sanitary situation when this army is quickly expanded to two hundred and fifty thousand. Physicians and surgeons from civil life, however well qualified professionally, as a rule are not prepared to assume the responsibilities of medical officers charged with administrative duties and the sanitary supervision of camps. The proper performance of such duties can not be expected from a physician without military training or experience, no matter how distinguished a position he may have held in civil life.

Courage and patriotism on the part of line officers and enlisted men can not take the place of knowledge and experience. New levies of troops are, as a rule, ignorant of the first principles of camp sanitation, and reckless as to the consequences of their neglect of prescribed sanitary regulations. Therefore training and discipline are essential factors in the preservation of the health of soldiers in garrison or in the field.

The value of the aphorism "In time of peace prepare for war" has received additional support. This preparation should include a corps of trained medical officers larger than is absolutely necessary for the army on a peace basis, and systematic instruction in military medicine and hygiene for the medical officers of the national guard as well as for those of the regular army; also instruction of line officers in the elements of hygiene, and especially in camp sanitation. It should also include the establishment of camping grounds in various parts of the country, having an ample supply of pure water, a proper system of sewers, etc. If our volunteers could have been assembled in such camps during the late war a saving in lives and money would have resulted which would without doubt have demonstrated the economy of such preparation for war in time of peace.

THE VOICE IN DIAGNOSIS.*

By ALEXANDER J. C. SKENE, M.D.

I. INTRODUCTION.—The easiest and most interesting method of studying the voice in all its relations to health and disease is to begin at the beginning of the development of language and follow its evolution from the first

* Read before the Brooklyn Medical Society, March 17, 1899.

audible functions of a primitive larynx up to the mature speech of the highest types of the human race.

The demands of professional life do not permit of our doing more than glancing at some of the leading principles of the subject. It must suffice for our present purpose to recall the fact that lower beings express their thoughts and feelings by a very limited number of sounds, that are multiplied as creatures ascend in the scale of brain development. The primitive races in the human family having small brains that are not extensively cultivated, their mental powers are limited. They have few ideas, thoughts, and emotions, and hence have few words in their language, and they speak in a monotonous way. Having no extensive range of thought or marked shades of meaning, they express themselves without any great range of modulation.

As the brain grows in size, power, and activity, the voice develops to meet the requirements of the mind, until we have in our day that infinite variety of voices, beginning with the uncouth babbling of the savage, up to the orations of Demosthenes and Webster; from the wild, weird chant of the dusky maid in darkest Africa, to the singing of Patti and Melba.

The development of the voice in infancy and childhood follows the law of evolution observed in the lower animals, and as that comes under our observation we can learn much that is needful in our everyday routine. Indeed, before we are aware of it we acquire a wonderful comprehension of this apparently complex subject. Fortunately, we learn all the characteristics of human voices as we personally learn to speak the language of our parents, through the sense of hearing; and when we begin to apply our knowledge, unconsciously acquired in childhood, to our scientific work in the profession of medicine, we have only to review and arrange the facts according to the process of natural evolution.

II. THE VOICE AS AN AID IN DIAGNOSIS.—The voice and its modifications indicate the conditions of body and mind more clearly than any other factor in the long list of physical signs and symptoms presented to the physician for his guidance in the great science and art of diagnosis, and, strange to say, very little attention is given to the subject by writers and teachers of medicine and surgery, so far as I know. I am bound to say in justice to others that my opinion on this part of my subject is based upon the fact that a rather extensive reading of the literature of diseases of women discloses a notable silence regarding the voice. If, however, I am unjust to others whose labors may have escaped my notice, I trust you will correct my sins of omission.

As this communication is intended to be suggestive, rather than elaborate and comprehensive, it may, I trust, not savor of pedagogic autocracy to state, by way of recalling familiar facts, that there are three factors of interest in the production of the voice: First, the larynx, or vocal organ; second, the motor power, or respiratory

system; and third, the directing, controlling agency, innervation. Necessarily there must be back of all these a psychological mainspring, the nature and relationship of which may be determined according to the way of thinking of my hearers individually and collectively. Recalling these facts and the infinite variety of bodies and minds concerned in the production of voices, leads up to the different types of natural voices with which one must become familiar before undertaking the study of changes produced by disease. The subject is rather complex, yet none the less interesting, because of the vast variety of modulations and intonations employed in speech, to fully express all the ideas, thoughts, and emotions of the mind. If human beings spoke in monotone one could soon learn to distinguish the different types of normal voices, and as easily learn the changes and modifications of character, intensity, pitch, volume, and sustaining power. The voice used in quiet narrative or description, in logical argumentation, and in expressing the stronger emotions, such as fear, anger, joy, and sorrow, must first become familiar to the diagnostician before he can avail himself of these characteristics as evidence of disease. When one recognizes the fact that there are as many kinds of voices as there are of faces in this world, he may despair of ever being able to familiarize himself with the natural voices as heard in everyday life; but a little careful observation and thoughtful study soon reveals the fact that there are a few types which are readily recognized, and that all others are simply modifications of the leading distinctive ones. First, there is the immature child voice, which is untrue; that is, it is characterized by being a fraction of a tone above or below the normal key. This is the natural voice of childhood, and when once understood becomes familiar and easily remembered. Some adults retain the child voice, the significance of which will be referred to later on. Then there is the soft voice of the timid, bashful person, a variety of which is found in the cautious, cunning one, who often drops into a whisper in conversation, although alone with his auditor. The quiet, clear, musical voice of the educated person who speaks correctly is the highest type, and is in marked contrast with the loud, strong voice of the self-confident, aggressive one, whose head is usually small and round, while the stomach is large and powerful in proportion to its size. The low-pitched voice of the uncultivated who talk in monotone; the high-pitched voice of those of the nervous temperament who talk rapidly and in staccato. The voice that may be of any pitch, but is used in a hesitating, drawling sort of way, if musical and agreeable, belongs to the thoughtful; but if in the minor key and acutely accented, betokens a vinegarish element, either of peevishness, dissatisfaction, or sarcasm. These are a few of the types which require to be familiarized by observation, not only as a preparation to the study of voice changes as indicative of disease or derangement in given cases, but also as a valu-

able indication to assist the practitioner in determining the mental, and to some extent the physical, make-up or personality of each of the many who come under his care. All this may appear to be a most complex and obscure subject, difficult to master and not easy to put in practice; but it is no more so than to take into account constitutional peculiarities and idiosyncrasies. To one possessing an acute sense of hearing the subject is so interesting that knowledge is acquired regarding it with a facility that gives pleasure instead of by painful, laborious work; indeed, to one with good hearing much of the required knowledge comes unconsciously through contact with those about him in daily life and before taking up the study of medicine.

In order to follow the subject in something like systematic or natural evolutionary order, the voice modifications which indicate the condition of the mind at the time of examination should be considered. This naturally follows after acquiring a knowledge of the various types of voices and becoming acquainted with the normal voice in those who come under the practitioner's attention. Bearing in mind always that the function of the larynx is dominated by the brain and nervous system, the voice itself, to a great extent, expresses the state or attitude of the mind more truly than the words spoken. *The tongue may lie, but the larynx tells the truth.* The words spoken may purposely conceal the thoughts, and thereby deceive by conveying wrong impressions; while the character of the voice betrays the true feeling at the time of the articulate speech, whatever it may be. The modulations, intonations, pitch, degree of resonance, and other modifications of the voice change the meaning of words; so that one sentence spoken in different ways conveys to the hearers very different ideas. It is because of this that a remark like the following is so often heard: "It was not what he said, but the way in which he said it, that offended me—pleased me—or made me suspect him." Another good illustration of the misleading character of words used and the truthfulness of the voice that speaks them may be observed in women who, desiring to conceal their sorrows, talk cheerfully, but have tears in their voices. (The latter phrase is borrowed from the language of the artist.) This shows that the voice has a natural history of its own, which plays an important part in making up the natural as well as the clinical history of every human being, and, while it can be made to express or conceal certain marked states of mind and body, it takes an equally important part in the development of the clinical history of nearly all known diseases. The voice as an evidence or index of certain states of the mind which are normal under certain circumstances is illustrated in the following: In a person who is in ill-humor temporarily the voice is confined usually to the middle register and he speaks in rather slow time. This is popularly known as growling. The voice in strong anger, wrath, or rage is harsh in character, high in pitch, somewhere

in the upper register, in faster time, and punctuated with deep, rapid respirations. The consonants are emphasized, and the voice, when lowered in resonance, gives the hissing voice of the stage villain. The harshness of the voice is perhaps due to the extreme tension of the muscles of the neck and larynx. Contentment or pleasure is indicated by a rather low-toned voice, musical in character, and of middle register and pitch. In some cases the voice has an element approaching laughter. In joy or glee, the voice is higher pitched, more intense in character, and of good volume, generally interrupted. This is expressed by the laymen as shouting for joy, or screaming with delight. Dread, apprehension, and doubt are shown by the voice being slightly tremulous, imperfectly sustained, low-pitched, uncertain in resonance, and interrupted. The voice of fear or fright is high-pitched, staccato, or whispering, if the fear is intense. In women it is often thin in character, wanting in resonance, and screaming or screeching in tone and tempo. The voice of sorrow is low, soft, tremulous in character, not well sustained, but inclined to be continuous, or approaching to the singing voice, and in the minor key. The chief interest for the physician is to know how to distinguish the voice of sorrow from an imitation. Many patients try to talk in a sorrowful way, but they simply grumble in a minor key, and the voice of the imitator is generally more harsh and higher pitched than the genuine voice of the truly sorrowful. They fail to produce the quiver or tremolo. No one but a consummate artist can counterfeit the voice of sorrow, and then only in singing; rarely, if ever, is the imitation well made in speaking. These are only a few hints regarding certain ways in which the voice changes express the physiological mental attitudes.

With this meagre introductory basis I may take up the subject in its relations to diseases in infancy and childhood. Infant patients being unable to express their aches, pains, and suffering in words, the physician has to depend upon other signs in making a diagnosis; consequently the voice should be carefully observed. Of necessity this needed attention has been given in pædiatrics, I presume, more fully than in dealing with adults. Ordinarily students are taught to recognize the piercing screech as diagnostic of cerebral meningitis, which, once heard and its meaning understood, is not forgotten. This voice sound, or a similar one, is occasionally uttered at the beginning of a convulsion. It is therefore an unnatural voice, being only heard in cerebral affections, and is in a marked degree diagnostic. Crying is the only way in which an infant can express its wants, and it may be said that there is a natural cry in infancy which is not expressive of any kind of suffering and has nothing of the nature of weeping in it. I have heard that infants never cry unless they are sick or suffering. *That may be true of children, but not of infants.* Infants cry vigorously when they want food, though not painfully hungry. They often

awake from a sound sleep and, if not nursed, cry until they are fed. On the other hand, infants who seldom or never cry are often found to have serious organic disease—hydrocephalus cerebri, for example. The cry which indicates some slight irritation of the mucous membrane of the alimentary canal, such as intestinal indigestion, or disturbance of the skin from heat, cold, or annoying clothing, is so near to the natural cry that it is not easily distinguished or described. From the ordinary cry, which may be called normal, it differs in several respects, according to the degree of discomfort suffered by the patient, and its temperament or personality. Some of the characteristics are that the cry is louder and more intense, and the screams follow each other in rapid succession; or the sound is begun in a high pitch and falls abruptly; or the sound ends in a higher pitch than that in which it began. In more pronounced indigestion or skin irritation the cry is more intense and prolonged, or continuous, with only a pause of a moment or two now and then. There is occasionally an abrupt rise in pitch, giving that ill-natured element which is irritating to the hearer and usually is supposed to be an expression of temper. Such infants are called by spinsters and bachelors “spunky,” and are said to cry wickedly. Infants who are weak from imperfect organization or exhausting disease, when suffering from temporary irritation, change their voices from the low and intense to a plaintive wail. The thin quality of the voice, high pitch, and increased flatness in tone give the characteristics of the weak and suffering infant. All these attributes increase as the patient becomes weaker, and disappear gradually if strength and relief are obtained. Spasmodic, intermittent pain, which occurs in the acute indigestion of infants, produces a cry which is loud, intense, and violent, with intervals of complete repose. This cry can usually be distinguished from the crying that is less intense and aggressive, which occurs in the muscular and joint pains of rachitis. In peritonitis the cry is suppressed: that is to say, the attack is well made, but ends abruptly, and is sharp or shrill in many cases.

The voice changes in diseases of the respiratory organs in infants are necessarily many and varied. I shall refer in brief to only a few of those which are most valuable in the investigation of the more common diseases. The loss of voice and the various degrees of its modification and impairment in laryngitis are so well understood that I shall pass over this part of the subject.

In rhinitis, with closure of the anterior nares, the resonance of the crying voice is diminished, and is continued in a stentorian, imperative way, at least in the beginning of it. There is a certain voice sound characteristic of bronchial and pulmonary diseases, such as grunting respiration, as it has been called, which is a soft, low, short sound, made at the beginning of each expiration, which occurs in certain stages of all acute dis-

eases of the lungs and bronchi, but is most perfectly developed in inflammation of the smaller bronchi, capillary bronchitis, and lobular pneumonia. At the close of the inspiration there is a short, abrupt pause, and at the beginning of the expiration the sound is emitted. Musicians would say that this was a chest note, showing a diminution of the thoracic or chest resonance.

In lobular pneumonia and pleurisy with effusion, there is a similar sound produced at the beginning of each expiration, but it is a little less prolonged and much less resonant, owing to the solidification of lung tissue from the products of inflammation or condensation of the lung from the pressure of fluid in cases of pleurisy. Not infrequently this sound is absent altogether, especially in the advanced stages of the disease. Sometimes the sound is more of the nature of a low, soft, superficial moan, and is often continued in sleep. Occasionally it subsides altogether for a time, to return after an attack of coughing or a change of position.

From the age of five years, or thereabouts, up to puberty, the voice in disease is much the same as in adults, excepting that the characteristics of the undeveloped, immature voice continue and to some extent modify the voice signs of morbid states. A consciousness of being incompetent to discuss the infantile part of the subject has rendered me timid, and hence brief and unsatisfactory. In fact, I had only a few years of practice among children; so that which is here presented comes more from memory than from present knowledge.

The voice modifications caused by disease in adults may be classed according to the agents concerned in the production of the voice. There are, as already stated, the larynx, tone producer; chest, throat, mouth, and nasal cavities, which produce the overtones, or supplementary tones of the voice; the respiratory organs, which supply the motor power; and the primary coordinating brain and nervous system.

Derangements of the voice due to lesions of the larynx itself, and affections or derangements of the nervous system and circulation which affect the functions of the larynx, are usually manifested by various forms and degrees of hoarseness and loss of voice, partial or complete.

Hoarseness indicates either acute or chronic inflammation of the larynx in various degrees or stages. There are certain structural changes of the vocal cords produced by inflammation, tuberculosis, or syphilis, indicated by a hoarse, whispering voice, which is permanent, and suggests that the primary morbid process has subsided, but left the vocal cords in such a condition that they can no longer perform their function.

The laryngologists may be able to distinguish the pathology from the various kinds of hoarseness, but of this I have not learned anything from them.

The loss of voice—aphonia—indicative of deranged innervation is characterized usually by the absence of

all effort at speaking. The best illustration of this is found in hysteria, familiar to all practitioners. In many cases it is feigned, like most of the other symptoms of hysteria. Hysterical or nervous aphonia is distinguished from loss of voice due to laryngeal disease by the fact that in the former there is no effort made to produce sounds, while in the latter strong efforts are made to use the voice, which results in whispering in a hoarse or soft way.

These voice signs of disease are well defined in works on practice of medicine, and are mentioned here as suggestive of how valuable they are and have been in turning attention to the subject as related to all branches of medicine and surgery.

III. MORBID STATES OF THE VOICE INDICATING LESIONS OF CIRCULATION.—The voice is husky, tremulous, and not well sustained in mitral insufficiency with compensating cardiac hypertrophy. The quivering or shaky voice in this form of heart disease, which I have called tremulous, is very different from the tremolo of the singing voice, or the trembling voice of strong emotion, which is musical and expressive of certain normal conditions. The one is in regular, even waves of vibration, the other (caused by the morbid heart action) is irregular in degree and rhythm. At times the shakiness is marked, and again absent.

The husky quality of the voice when present in heart disease indicates hyperemia of the vocal cords, and is the same as the husky voice often found in Bright's disease, which is due to œdema, and very like the rough, harsh voice of the habitual drinker.

The voice becomes high-pitched, soft in quality, and ill-sustained in aortic insufficiency, and is a great aid in distinguishing the two forms of heart diseases.

The various blood states have a marked influence upon the voice, changing it so that it reveals the cause of its variety.

Hyperemia, as already stated, lowers the tone of the voice and modifies the tone quality, according to the degree of congestion.

Anæmia raises the pitch of the voice, renders it thinner in quality, and if forced, it is quite intense, but is not well sustained and is apt to break from time to time. It is not easy or always possible to tell the modifications of the voice which occur in anæmic conditions from those that are present in certain conditions of the nervous system—fatigue, debility, and exhaustion, for example. The impairment of the voice in anæmia is rather uniform, while in nervous exhaustion it varies in degree.

Dehydrated blood—that opposite state to the hyperæmia which is more familiar—produces the most marked changes in the voice. This is best illustrated in Asiatic cholera. In the second stage of this affection the voice becomes very high-pitched, thin in quality, then a whisper, and finally is lost completely. Similar changes occur in cholera morbus and other affections

in which the quality and quantity of the blood supply are changed.

The weak, soft voice in acute anæmia from hæmorrhage is distinguished from that of dehydration by its being low-pitched, owing to relaxation of the vocal cords. It is always weak and at times whispered.

This loss of strength, volume, or resonance of the voice—which comes on, not always suddenly, but gradually, and yet in a short time—is a most valuable sign of concealed hæmorrhage, such as the secondary hæmorrhage which occurs after abdominal operations, and also in post-partum hæmorrhage.

In surgical cases the weakening of the voice comes on gradually, the time required to effect the changes depending upon the size of the bleeding vessels. The value and reliability of this sign of hæmorrhage in the voice depend on its being the first in the clinical history to be observable. The voice beginning to fail is the first sign or warning that the much-dreaded hæmorrhage has begun. The attention of the surgeon being attracted by the modifications of the voice, other evidence is sought for, and the suspicion aroused is confirmed and a diagnosis made while there is yet time to give relief. In case the warning voice passes unheeded or is not understood, the hæmorrhage goes on until the time to save life by arresting the bleeding is past.

When bleeding starts in the peritoneal cavity, pain usually comes on; but pain is often present from other causes, and it is not recognized as evidence of hæmorrhage, at least not until it has gone on to a very dangerous extent. I hold, then, that the voice is the first to show the effects of concealed hæmorrhage and to proclaim, not in words, but by its change of attributes and characteristics, that the much-dreaded event has occurred, dreaded the more by the surgeon, because the operator is responsible for secondary hæmorrhage; and in the majority of cases he can control the bleeding and save the patient if the diagnosis is made in time.

One whose attention has been turned to this subject may be able to make use of the change of voice in detecting concealed hæmorrhage without noting all the elements of the change. A change is noticed, and the observer is put on the right line of investigation, which, with the aid of other signs and symptoms, leads to a correct diagnosis.

Sudden and profuse hæmorrhage, such as may take place post partum, affects the voice abruptly and in much the same way as in syncope. Therefore it is not always possible to say whether the voice signs arise from hæmorrhage, fainting, or sudden shock; but the voice signs are none the less valuable because they direct attention to the state of the patient and indicate that some one of these morbid states is present, and a distinction can, as a rule, be easily made through the additional evidence present.

IV. THE VOICE AS AN INDEX OF THE CONDITION OF THE NERVOUS SYSTEM.—It is in this department of in-

vestigation that I have found the voice changes of most importance. In all morbid states of the nervous system, acute and chronic, the voice is changed, and each deviation from the normal is diagnostic of the conditions which produce the changes presented.

V. THE VOICE BEFORE AND AFTER MAJOR OPERATIONS.—One of the most important parts of the clinical history which the surgeon ought to know fully, before and after major operations, is the condition of the nervous system. The temperature, state of the circulation, and general nutrition—in short, the condition of all the vital organs of the body—can be easily and clearly determined; but the less marked deviations from health and strength of the nervous system are not easily made out. The milder forms of neurasthenia are not well manifested, and the symptoms of nervous weakness that may be present are often overlooked, or, when apparent, are often attributed to fear of the operation, want of courage, and so on. Even the voice signs of nervous weakness and nervous depression are not pronounced, and when they are present one finds it difficult to determine whether they indicate a degree of exhaustion, temporary depression, or fatigue. Still, by watching and repeated examinations, a diagnosis can be made in most cases. This is of far more importance than at first appears, but may be fully comprehended by considering two cases as nearly alike as can be imagined: One patient bears operating well and recovers promptly, while the other either dies or makes a tedious convalescence. The cause of the difference is in the nervous system. The one is strong, the other is weak. I contend that the difference between the two is manifested in the voice, the one being normal and the other morbid.

VI. THE TESTIMONY OF THE VOICE AFTER MAJOR OPERATIONS.—The voice in surgical shock is reduced to a minimum of volume and resonance, the degree of loss of voice being in keeping with that of shock. In severe cases the voice is often reduced to a whisper, and is only made audible by an effort on the part of the patient. Even the forced voice shows a marked diminution of volume and resonance, is husky and ill-sustained. Patients often decline to speak in an audible voice because it requires more of an effort than they are able to make. Failure of the voice is the first evidence of shock, I presume. At any rate, shock affects the voice as soon as it does the pulse, if not sooner. This, of course, has not been noticed, owing to the majority of subjects being anesthetized when the shock is caused. I have had an opportunity to see many cases of shock from injury, and in all of them the voice gave way first. On that account I have depended upon the voice signs in making a diagnosis more than upon any other sign or symptom, and have seldom, if ever, been mis-guided.

Equally reliable are the voice signs in showing reaction from shock. Improvement in resonance and power of the voice is the first sign of recovery. Sev-

eral times it has happened that my assistants and nurses have reported that there were no signs of improvement, and they were discouraged in consequence; but, finding an improvement in the voice, I have encouraged the vigorous continuance of the treatment, and success has followed.

VII. THE VOICE IN APATHETIC CONDITIONS OF THE NERVOUS SYSTEM.—There is a peculiar state of the nervous system into which patients sometimes fall after grave operations, which has never been fully described, so far as I know, which is characterized by indifference. It seems as if the nervous system became overwhelmed and gave up its function of displaying the danger signals. The vital forces apparently give up the task in despair. There is no alarming change of temperature or pulse; the patient makes no complaint of any mental or physical suffering, and yet the condition is a most grave one and most deceptive, leading the attendants to be hopeful and free from apprehension until death comes as a surprise to them. There are no signs or symptoms that are diagnostic. Even the face is placid; the voice, manner, and mental action are the only indications that there is something far wrong. Even the mental condition is not always apparent to the casual observer. The abnormal voice alone tells the story.

All that I have ever read or heard about this condition, following grave surgical operations, is embodied in a story told by J. Marion Sims. Not knowing where to find the story as told in Sims's graphic way, I can only give the facts from memory.

Sims was in Edinburgh and had seen Keith do ovariectomy in a very bad case. Two days after he called on Keith and anxiously asked about the patient's progress. Keith said she was doing badly, expressed grave doubts about her recovery, and added, "Come and see her." This was just what Sims wanted to do, so he went and examined the patient, looked over the record of pulse and temperature, and inquired about her nourishment. Then the two worthies retired to an adjoining room to discuss the case. Sims expressed great surprise at Keith's gloomy view of the patient's condition, adding that she was in remarkably good condition for one who had undergone such a severe ordeal. Keith replied that he "did not like her; that he was afraid that she would not do." Sims wanted to know on what grounds he based his unfavorable prognosis. "Well," said Keith, "my old nurse, who has cared for so many of my cases, does not like her condition, and I have great faith in her opinion. She is seldom mistaken." Sims asked to have the nurse called in to find out her reasons for the doubts and fears. Mrs. Dow, the nurse, in reply to the doctor's direct questions, said that "the patient was too good; she was indifferent, wanted nothing, was pleased with everything that was done for her, and those cases do badly," she said. "I like ones who are hard to please; the devils always do best." "Yes," said

Keith, "that's it—she is indifferent; her nervous system is giving out."

After reading this brief essay by Sims, I discussed the subject with Keith, and have been on the lookout for such cases and have seen several of them. They are very obscure. There are none of the well-known signs and symptoms present to warn the attendant of the danger, except the voice changes and the mental attitude of the patient. The voice is negative, so far as expressing any feeling such as pleasure, sorrow, irritation, ill temper, or anxiety is concerned. This negation or indifference manifested in the voice is nearly always mistaken for contentment, and is therefore misleading. The pitch is lower than normal and the intensity diminished. Many times the speech is inclined to be spasmodic, abrupt, more jerky than usual. There are many pauses in the sentences, the patient being apparently short of breath. The voice occasionally breaks or fails, but is never forced.

In this it differs in a very noticeable degree from the voice in acute prostration, in which it is ill sustained and often forced, and hence higher in pitch and more intense while it lasts. This condition of irritability and general hyperesthesia, which comes on after the depression that immediately follows operations, and in many cases continues for a long time, is plainly expressed in many ways and is easily detected without taking the voice into account except incidentally. But the voice signs peculiar to this condition of the nervous system should be understood in order to be able to distinguish between this and the voice of the used-up nervous system, in which the voice gives the leading evidence.

Knowing the normal voice in a given case, one can easily observe that it becomes higher in pitch, more abrupt, more intense by being forced and more irregular in its intensity, that it is not well sustained, and is either plaintive or peevish, according to the disposition of the patient and the stage or degree of the affection. After a period of repose such a voice becomes husky, but clears up after an effort on the part of the patient. This huskiness is more likely to occur if there is fever present. It may suffice to say in this connection that every gain or loss of strength, especially of the nervous system, is first indicated in the voice, in the vast majority of cases.

Having given most attention to surgical cases, I have become more familiar with the voice signs as related to the conditions of this class of patients. Now, as a matter of routine observation, I note the state of the voice first, take the temperature and pulse, and finally complete the examination.

VIII. THE SIGNIFICANCE OF VOICE EXPRESSIONS OF PAIN AFTER ABDOMINAL OPERATIONS. The irregular, subacute pain of intestinal colic, so often found in this class of cases, is indicated by the patient holding the breath for a time, and then in a rather low pitched

voice complaining in a groan, grunt, or exclamation, such as a prolonged "Oh!" "Ah!" and the like.

The intermittent sharp, short, high-pitched screech or scream is characteristic of the pain of peritonitis. Sometimes the cry is violent, and again it may be faint; but always short and abrupt and shrill; generally in a minor key.

This language of voiced expression of pain, if I may use this term, is far more reliable evidence in the clinical history than the average description of suffering given by patients.

Some years ago, while engaged in studying the relations of diseases of the sexual organs to mental disorders, I observed many peculiar voices among the insane. Something unnatural in the voice was heard among all these crazy subjects, but I never had time to determine their meaning so that I could utilize the evidence in diagnosis. I only progressed far enough to be able, or to fancy that I was able, to recognize the voice of one who was insane. This was sufficient to interest me greatly in the subject and make me look to the neurologists for further information. Up to the present time, however, the voice in the various mental affections is still in the shades of obscurity, and though the field is ample, in my opinion, and very interesting, I fear that I shall not have time to cultivate it. I must, therefore, leave this part of the subject to those who have the ability and opportunity to solve the problem.

In conclusion, I may say that to those who have never given any attention to this subject my remarks must appear rather obscure, and that, in order to make this means of diagnosis of any practical value, a great amount of time and practice must be required. I admit also that one must have the sense of hearing in a normal state, so that the varieties of quantity and characteristics of sound can be appreciated; but it is not necessary to be versed in the science of music, or to comprehend the art of tone production, modulation, coloring, phrasing, intensity, pitch, volume, and character of the voice to be able to detect the derangements of the voice that are caused by disease and expressive of the diseases that cause them.

One's hearing must be correct to master auscultation, and yet one need not be skilled in the science of acoustics, with all its multiplicity of laws, in order to master auscultation and percussion. So it is in voice interpretation or sound reading. Much practice and observation are necessary to become an expert in reading by sound the language of disease as expressed by the voice produced under deranged conditions of action. This may be made more complete by referring to the fact that one learns to recognize all the various kinds of respiration that occur in all the diseases, while the physiology of respiration may not be fully understood. Many a good practitioner can recognize with great promptitude deranged breathing and understand the cause of the character of it, yet might not know the

anatomy and physiology of the bronchial and vesicular elements of inspiration and expiration, their character, intensity, pitch, and relative duration.

So it is with the voice. One may be able while in practice to detect signs of disease in certain derangements and modifications of the voice, and yet may be unable to make an analysis of the attributes of that voice or give any technical description of it that could be recognized by another.

VAGINAL DOUCHES, ANTE-PARTUM AND POST-PARTUM.

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IN the past, and even at present, it is extremely common to find obstetricians and general practitioners who are especially fond of giving vaginal douches, and use them as routine treatment instead of dealing with the douche as with forceps, premature labor, and abortion, having certain distinct indications for its use.

Douches may be divided into three varieties: Hot, cold, and Scotch (hot and cold alternately), any of which may contain certain chemicals which render them more or less antiseptic.

The lining membrane of the vagina is in many respects similar to that of other mucous surfaces, despite the views of Pretti, who states that it is merely an invagination and contains none of the essential properties of mucous membrane. It is therefore fair to conclude that any interference with its normal condition can do no good, and may do harm. The vagina is usually well lubricated by a rather tenacious secretion of acid reaction, probably due to the action of the bacillus of Doderlein. With few exceptions the vaginal secretions are increased during the latter months of gestation and after labor—a physiological provision against infection during delivery and the puerperium, since the ordinary pathogenic bacteria can not reach the uterus without first becoming entangled within the meshes of the vaginal secretion, which by its tenacious property prevents their reaching the uterus, and by its acidity and selective antiseptic property arrests their further development. Given such a physiological antiseptic, if not possibly germicidal lubricant of the vagina, with the additional provisions of its walls being constantly in apposition and a plug of mucus in the cervix, it is fair to conclude that a woman rarely, if ever, becomes infected except that such infection is conveyed from without, either by the doctor, the nurse, or by the vaginal secretions having first been washed away by means of douches.

Bacteriology has contributed so liberally to medical science that it is scarcely possible to find a doctor of medicine who does not thoroughly cleanse his hands be-

fore attempting to make a vaginal examination; yet almost as rare as this is it to find an accoucheur who first cleanses thoroughly the external genitalia and adjacent parts of the patient. While asepsis has markedly lessened the percentage of septic cases after delivery, it is unfair to expect a hand perfectly free from germs, after proper cleansing, to pass over unclean skin and hair—two of the common sources from which infection may come—and yet carry no micro-organisms with it into the vagina, cervix, or uterus.

The question of when and when not to douche before delivery of the child is one deserving of consideration. Various authors advise douching where leucorrhœa is pronounced; others, where it is alkaline in reaction or highly irritating; others, where it contains pathogenic bacteria, or where unclean instruments have been introduced into the vagina, as in abortion.

A profuse discharge is no indication whatever for vaginal douching, except that bacteriological examination has shown such discharge to contain virulent pathogenic organisms. I have repeatedly seen a marked leucorrhœa continue for weeks or even months, yet repeated bacteriological examinations failed to detect the presence of any pathogenic bacteria. When the discharge is alkaline, or faintly acid, the varieties of bacteria found are many; yet it is likewise rare to find organisms pathogenic in character. Kronig, in about two hundred examinations, decides that the vagina contains no pathogenic organisms except those of gonorrhœa and the thrush fungus. He further found that if, an hour after the infection of the vagina, an antiseptic douche of lysol were administered, the micro-organisms were not destroyed, and that it took the vaginal secretions from nineteen to thirty-six hours to destroy these microbes; but when no douche was given, the same bacteria would disappear in from eleven to twenty hours.

Doderlein in a hundred and ninety-five examinations found streptococci in eight. However, he was unable to show that this organism was pathogenic in but five cases. Williams, in a report of the study of ninety-two cases, in connection with a general survey of the literature, agrees with Kronig that "the vaginal secretion does not contain the usual pathogenic cocci," having found the *Staphylococcus epidermidis albus* twice. Kelly, in his late work on gynecology, states: "If staphylococci alone are present, especially the comparatively harmless citreus, albus, or epidermidis albus, the danger to the health of the patient is much less than in the case of the streptococcus, which tends to produce general infection."

Walthard found streptococci in twenty-seven out of a hundred cases examined, yet he was unable to demonstrate any virulence of these organisms. Inoculations on animals gave no results, except that a certain part of the animal was first reduced in vitality, in which case he was able to produce abscesses. Walthard draws

the following conclusions: "The virulence of vaginal streptococci of a pregnant woman, not examined for some time, is equal to that of the streptococci that live upon other mucous membranes, or in their secretions. In other words, the vaginal streptococci are not virulent, and behave as saprophytes upon healthy tissue."

Gonorrhœa may be either urethral or cervical. Since gonorrhœal pus causes no irritation to the vaginal walls, even when kept in direct contact with them for twenty-four hours, there is little necessity for douching the vagina, a surface already immune. If the urethra alone is affected, the douche would have a tendency to remove the normal vaginal secretions, and thereby allow the gonococcus to make its way to the cervix unmolested. Studying a large number of cases in the venereal wards of the Philadelphia Hospital, I noticed that a large percentage of the cases showed involvement of the cervix uteri. A more careful study proved that patients who had not taken vaginal douches were most likely to show only involvement of the urethra; while fully four fifths of such patients showed involvement of the cervix in from one to two weeks after admission. (Vaginal douches were given every morning.) It has been my fortune to follow several cases in which gonorrhœa developed during the period of gestation, in one of which there was pronounced vaginitis; yet in all of these cases there was nothing abnormal during delivery or the puerperal state, nor was there any infection of the children. Bacteriological examination alone can determine whether or not a leucorrhœa is gonorrhœal in character, and the fact must not be lost sight of that diplococci, which are found in the pus corpuscles clinging to the epithelia, giving the same reaction to stains (do not stain by Gram's method), are occasionally met with. The difficulty with which the gonococcus is grown on ordinary media is probably the true differential point. The question of irritation and the introduction of instruments is one to be left entirely to the judgment of the physician in charge. "It has been clearly demonstrated that the injection of an antiseptic fluid into the vagina will not destroy pathogenic germs there, and will rob the woman to a certain extent of the safeguards that Nature provides for her against infection" (Hirst).

The objections to the use of ante-partum douches will in a great measure hold true in cases after the delivery of the child. However, a post-partum douche, if carried into the uterus, may be of service in stimulating that organ to contract, and thereby arrest hemorrhage. It may also be of service in the removal of small particles of placenta and membranes, and to remove toxins from the uterus after the symptoms of sepsis have developed. The giving of a uterine douche, after the hand has been introduced into the uterus, or after the application of forceps, is an unnecessary procedure, as it can do no good.

Where a uterus has once become infected a uterine douche does not even attempt to remove the bacteria.

It simply washes away the toxins and thereby prevents further absorption into the general system, giving the patient relief, and allowing her to gain sufficient vitality to prevent the further development of the micro-organisms already well imbedded in the uterine mucosa. Not only is this true of douching, but of curettement. I have repeatedly made cultures from the gauze removed from a uterus in from twelve to twenty-four hours after a curettement, and have never failed to find the same bacteria that were present at the onset of the symptoms; however, cover-slip preparations always showed a diminution and occasionally an absence of these organisms; and I have found a pure culture of the *Staphylococcus pyogenes albus* from the cervical discharge forty-eight hours after the pulse and temperature were normal.

To summarize:

1. A profuse leucorrhœa during the latter months of pregnancy is no indication for vaginal douching.
2. The chemical reaction of a discharge has but slight effect upon its antiseptic powers.
3. The vaginal secretions of pregnant women rarely, if ever, contain pathogenic germs except gonococci.
4. Vaginal douches favor the development of cervical gonorrhœa and puerperal sepsis.
5. The vaginal secretions may contain streptococci, staphylococci, diplococci, and bacilli, all of which may be non-pathogenic.
6. A discharge from the cervix may show the presence of pathogenic bacteria after all other symptoms of sepsis have disappeared.

PNEUMONECTOMY.

THE FUTURE TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS.

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THE subject of this paper states an opinion which I have held for some time, the propriety of which, I believe, will be established in the near future. The high death-rate and the unsuccessful medical treatment of pulmonary consumption are my apology for wishing to place this disease, in its incipient stage, in the category of surgical ailments. I am surprised that this has not been attempted, as the results from surgical interference in tuberculous affections of the joints, lymphatics, and abdomen have been so gratifying that one would naturally expect, reasoning from analogy, a desire to apply a similar treatment to the same affection wherever located. The lungs, however, would seem to offer a good field, for the reason that our diagnostic resources are such that the disease could be brought under effectual treatment before it had become widely disseminated. Most cases of pulmonary tuberculosis begin with a single focal point of infection, and I reason, were

we to secure this by a well-directed pneumonectomy, there is every reason to believe that this form of treatment would prove absolutely curative. From experiments which I have made on animals, I am satisfied that excision of diseased lung is not only a possibility, but comparatively easy of accomplishment. I commenced my studies on the subject in question in the fall of 1894 and continued them through the winter of 1894 and 1895. Dogs were used for the experimental work. My observations at the time were interrupted, and I am sorry that I have been unable thus far to put the knowledge gained into execution on the human subject. However, I hope to do this before a great while, and will content myself for the present in submitting the most important points developed as a result of my experiments.

I was anxious first to learn the requirements of success in making a pneumonectomy, believing that when this was accomplished the way was clear for successful work upon diseased lungs. No preference was given to animals previously inoculated with tuberculous material, as the knowledge to be gained was of a technical nature and could be gained equally as well upon the healthy animal. First, in regard to the precautionary measures, the same observations apply here as in other surgical work. Those relating to cleanliness must be insisted upon, as the pleura and lung tissue may be a little less resistant to the lower forms of surgical infection than some of the tissues of which we are more familiar. A cautery is necessary, and preference is given to good strong silkworm gut as the material for ligating the mass to be excised. A very important point is the location of the opening incision. It should be remembered that when the pleural cavity is opened, air enters and the lung collapses, leaving the thoracic cavity almost empty. The extreme points, the apex and the tip of the lower lobe of the lung are drawn so far away from corresponding points on the thoracic wall that if an opening is made immediately over the point where the excision is to take place, the lung will be found not available. Therefore it is better, when attempting the removal of either apex, to make the initial incision over and in line with the fourth rib, and, in any case, not higher than the third. This being determined, commence the incision near the outer margin of the sternum and carry it outwardly far enough to allow the easy introduction of the hand into the pleural cavity for the purpose of examining and withdrawing the desired lung. The rib should be removed next, and, in doing so, avoid the needless opening of the pleural cavity, as the introduction of air causes severe dyspnea, which may just as well be postponed until preparations are complete to hurry the conclusion of the operation. The costal end should be divided first, and the rib carefully peeled from its osseous and muscular coverings. Of course, it is understood that the area of the diseased lung should be clearly in mind before beginning the

operation. Upon opening the pleural cavity, the lung should be seized and engaged in the wound so as to obstruct the ingress of air, which will be found materially to lessen the labored breathing and afford the patient the needed oxygen. The amount of lung to be removed having been determined, a ligature, preferably of silkworm gut, should be thrown around the base of the mass, and drawn so tight that the bronchi and lung tissue are forced into a solid mass. A narrow-bladed clamp should then be applied external to the ligature and the engaged piece of lung removed with the cautery. After searing, the clamp should be removed and the disengaged stump dropped into the pleural cavity without further attention. The edges of the pleura should now be stitched together by means of a continuous suture and the superficial wound closed in like manner. Collodion makes an indispensable dressing for the purpose of hermetically sealing the opening into the pleural cavity. Labored breathing will be pronounced for the first twenty-four hours, but afterward will subside, due to the absorption of air imprisoned in the pleural cavity. It would be possible to remove this air by means of an air pump, but I am of the opinion that there is an advantage in a partial collapse of the lung in securing rest to the amputated part during repair. This is certainly favorable to the ligature securing the stump and prevents adhesion between the visceral and parietal pleura.

One of the great dangers in the operation is death from hemorrhage. This may occur from an accidental slipping of the ligature or from extravasation of blood in the air cells and lung tissue. This, however, will not occur if the ligature is properly applied. It is necessary to avoid puncturing the lung, as a fatal hemorrhage may follow the opening of a vessel. To avoid this accident, a better way is to throw the ligature around the entire mass and secure it by a proper knot. It should be drawn very tight. Pneumonia, I believe, will rarely occur where perfect surgical cleanliness is observed. When it does, I am satisfied it is due to defective precautions. I have made in all about thirty pneumonectomies, and was surprised, on re-examining the cases after some two to four weeks' convalescence, to find that I had the greatest difficulty in locating the site of my first operation. In many instances no stump remained. The lung filled the pleural cavity as though none had been removed, and this was true in all cases except those where an entire lung had been extirpated. In the latter cases the corresponding side of the thorax was destroyed through lack of equalizing the atmospheric pressure, but where a portion of lung was left to occupy the pleural cavity the air cells would undergo dilatation and conform to the thoracic walls. A lobe or more could be easily removed without altering in the least the contour of the chest.

The effect of the surgical work upon the animal differed in no way from the ordinary operation of equal

gravity elsewhere. I did not attempt a scientific demonstration of the effect upon the vasomotor nervous system, and will have to be content in supplementing this with speaking comparatively. Abdominal operations, I believe, affect the nervous system more seriously than operations upon the pleural cavity. This may be accounted for on the ground of exposure and disturbance to the splanchnic and other large ganglionic centres. In operations upon the pleural cavity or lung there is no such complicated system exposed to irritating influences. The respiratory plexus is, of course, involved, but in no instance did I witness any disturbance from this source. The same was also true of the cardiac movements. The convalescence, where the work was satisfactorily accomplished, was uneventful, and the animals partook of food with a relish the second day after their operations. With these favorable observations upon the dog, I can see no reason why we should expect any worse results upon man. A forced respiratory apparatus will doubtless be necessary in undertaking the successful work upon man. We should be provided with every appliance to sustain respiration artificially. Here would be a case where a trial operation upon a capital criminal would be of incalculable benefit. Could we obtain such practical information, it would immediately put us in possession of knowledge that could be turned to good account. However, we hope that a favorable opportunity will present itself and we shall soon be able to verify our views.

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MEDICAL GYNÆCOLOGY:

OR, THE RELATION OF
VITAL DEBILITY AND PASSIVE CONGESTION
TO DISEASES OF WOMEN.

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GYNÆCOLOGY has evolved rapidly. There are probably more specialists in gynecology than in any other single branch of medicine. There are probably more patients for these specialists than for specialists in any other line. One wonders what humanity did before the specialty began its evolution.

A prominent gynecologist has recently lifted the specialty from pelvic limitations up as far as appendix and kidney, and has reported observations which merit the serious discussion of the profession. I refer to the series of papers by Dr. Edebohls, of New York, the last of which appeared in the *Medical Record* of March 11, 1899, and was entitled *The Relations of Movable Kidney and Appendicitis to Each Other and to the Practice of Modern Gynecology*.

A New Note in Gynecology.—Considering this a step forward in the steadily evolving specialty, I venture a discussion of the subject. The new thesis is:

1. The local treatment of the general practitioner years ago did not give a great degree of therapeutic success.

2. The numerous failures led men to surgery—that is, major pelvic surgery, such as ranged ten years ago. This was a step forward, yet candid men had to confess that in many cases symptoms persisted after pelvic surgery had done its utmost.

3. The frequent failures of pelvic surgery to give relief, after the removal of everything possible, led earnest men to seek further.

A number of writers thereupon began calling attention to the frequent connection between downward displacement of the abdominal viscera and malpositions of the uterus. Dr. Edebohls has added the following observations: One fifth of *all* women have movable kidney or kidneys, though only one fifth of those afflicted (or one twenty-fifth of *all* women) have symptoms therefrom. Of those with symptom-producing displacement nearly all have appendicitis accompanying, as a result of hampered return circulation by indirect pressure of the displaced kidney on the superior mesenteric vein. Dr. Edebohls's thesis ends at this level, and his experience is that both appendectomy and nephropexy must be added to the former pelvic operations to restore such patients to perfect health; and that with these two added operations "gynecology has finally approached the ideal of an exact science."

Specific Cases.—We can grasp the subject better by specifying the class of cases belonging to it. Obviously vaginitis and other exclusively local matters will not fall under the list of failures from "local treatment." On the other hand, we can not charge failure to major pelvic surgery in such conditions as malignant growths, the rupture of a pus sac or a blood-vessel, or the torsion of a pedicle, or the rapid absorption of poison from an infected centre, or the strangulation of an intestine or excretory duct by pressure or otherwise, or ectopic gestation. If these grave cases are complicated with kidney or appendix trouble, the routine examination which discloses the trouble is a forward step in technique; and the correction of the trouble is so simple and easy and necessary as to preclude all debate.

This leaves for discussion an entirely distinct class of cases, viz., retrodeviation of the uterus, and what I have classified in a recent paper as "the less urgent cases of swollen and tender tubes, cystic ovaries, etc." I continue the quotation:

"These are the cases which walk about with slight disability, hope for a miracle from an operation (upon the pelvic organs), and spread distrust of the surgeon when they find it does not come. . . . In the evolution of gynecology many cases of passive congestion and muscular debility have been treated by abdominal section, and have been helped by the operation. Patients of this class have consulted the gynecologist month after month for a pelvic soreness that 'treatment' only temporarily assuages, and finally in discouragement

have consented to 'have something done'—that something meaning an abdominal section.

"In the *Medical Record* of March 19, 1898, the writer has discussed this neglected subject of passive congestion of the pelvic and abdominal organs. It comprises a congestion—almost an erectile condition—of ovaries, tubes, rectal veins, liver, spleen, kidneys (and appendix), and the soreness it brings is entirely analogous with the pain in the breasts near the menstrual epoch. Some women have breasts as sore as boils at this period—yet breasts have not been made the subject of operative furore on this account. This pelvic condition goes to form the diagnosis of 'salpingo-oophoritis.'"

Partial Failure of Orthodox Methods.—Bearing firmly in mind the specific class of cases under consideration, few medical men will disagree with the first postulate of the new thesis: "Local treatment" has not given satisfactory results; and, moreover, under the second postulate, the final resource of pelvic surgery has frequently left the poor patients with veins of the leg, rectal veins, appendix, kidneys, liver, and spleen as congested and as sore as before. Every operator has had this unhappy experience.

As to the third postulate: Aside from the credence due to responsible testimony, it is perfectly in accord with reason to believe that the added operations will relieve the congested parts operated upon. More especially is this true in cases of retrodeviation of the uterus, where the uterine displacement is only a later manifestation of the general enteroptosis. This view of retrodeviation (see *New York Medical Journal*, December 25, 1897) brought me some criticism when first advanced; and I therefore welcome this corroborative testimony from so high a quarter. My own observations, then, lead me to accept fully the statistics regarding the prevalence of these subject maladies in women living in our cities.

Even those of us who urge that gynecology is not all surgery, but has a feebly developed medical side, will be disposed to admit that surgery is the proper indication with patients who are improvident, self-neglectful, or not intelligent enough to weigh the alternative of medical treatment, or those who prefer surgery after considering both sides. Surgery, in these cases, is the strait-jacket where the moral suasion of medical treatment would fail.

Dissent.—But, admitting all this, I do file a protest that gynecology is more than surgery. Granting the prevalence of the condition, and granting the surgeon's power to correct it, it is still within the province of gynecology to seek the cause of so frequent an affliction. It is still non-surgical gynecology which guards against the condition. Prophylaxis in gynecology—a new field within the specialty—may render some surgery unnecessary; but think of the many favorite methods of treating small-pox made useless by vaccination!

Important to Seek the Cause.—The earnest conviction which I have repeatedly expressed is that the cause

of enteroptosis, displaced kidneys, retrodeviation of the womb, and an engorged venous system in women will be found in vital and muscular debility. Dr. Edebohl's says: "The one thing settled about the etiology of movable kidney is that it is due to a *relaxation and stretching* (Italics mine) of the lamina fibrosa of the renal adipose capsule." It is self-evident that relaxation and stretching would not occur in those muscularly and vitally fit. And is it not the gynecologist's province to maintain this "fit" condition in women? If the gynecologist can correct tendencies toward this unfitness and thereby avoid abdominal section, is not this non-surgical function as important as that of the surgeon who can only repair by mutilation?

Increased Venous Pressure and the Special Organ.—For example, the return blood current in the nose is hampered and we have a rhinitis; in the larynx, and we have laryngitis; in the bronchial tubes, bronchitis; in the spleen, splenitis; in the liver, hepatitis; in the appendix by the indirect pressure of a misplaced kidney on the superior mesenteric vein, and we have appendicitis. The infection follows the congestion, as a rule. Now, is it far-fetched to call a rhinitis in part an aggregate phlebitis, in that innumerable small veins become engorged and inflamed? Is not the same condition to be found in the veins and their *vasa vasorum*, down the leg, in the rectum, up the sides of the pelvis, and around the appendix itself? The relation between a debility of some sort and this hampered return blood current is evident. It is well known that increased blood pressure impairs the resistance of cellular life.

The whole subject of lithæmia, renal and cardiac—and, indeed, bronchial and laryngeal—involvement in passive congestion is simply named in passing.

Advancing Gynecological Views.—But I urge special attention to the steadily advancing conception of the gynecologists from (1) the idea that pelvic soreness was a cellulitis, (2) to the idea that it was almost exclusively an infection through the womb along the tubes, (3) to this new and truer idea that the congestion often comes first, and then follows an infection from the "resident germ"; and that this congestion is not limited to organs in the pelvis only, but extends from the plantar arch to the veins of the diploë. Recall for a moment puerperal eclampsia, puerperal insanity, the insanity of the menopause, the insanity in some post-operative cases, and the fact that the majority of hysterical and neurological cases are feminine. Congestion is the one known underlying fact in these cases.

(Of course, infection precedes congestion in all cases of contagion or inoculation.)

Some Spectacular Effects.—When these poor women return, aching after pelvic operations, one can frequently be as spectacular as the charlatan by calling their attention to their sore veins at the ankle, behind the knee, in the groin, in the rectum, up the sides of the pelvis, in the region of the appendix and over the liver and

spleen, or at one or more of these points. They draw immediate inference: they were operated upon unnecessarily. This should make a conscientious man—knowing how gynaecology has felt its way along, step by step—hasten to defend the operation. I have toned up the veins of many a post-operative case, but have never allowed such an inference to be uttered before me without earnest protest.

But if, by repeated success in ailing cases that have already been operated upon, and cases that have only contemplated operation, one has found that trouble in specific organs is often but part of a general condition, he is perfectly justified in saying to patients who dread abdominal surgery, "That is not alone your trouble; but here and here and here."

Even those who must do surgery to live will admit that if a tendency toward a deplorable condition can be recognized before an operation is justifiable, it is our duty to save the patient from the surgical cataract roaring in the distance.

Great Benefit from the Rest in Bed.—I debate whether much of the benefit from surgery—bear in mind all through this discussion the restricted class of cases—is not due to the rest in bed and the special care given an invalid after an operation, especially in cases of retro-deviation of the womb.

I cite in support the many successes of the Weir-Mitchell rest-cure régime.

What can be done without the Knife.—When by régime—but not by "local treatment"—you can take off fifty pounds in weight or put on forty; when you can decrease the size of a dilated heart, as proved by the skiagraph; when you can make the flabby solid of flesh, increase chest expansion, clear up brick-dust urine, stop palpitation, quiet borborygmus; change the color of the skin, the lustre of the eye, the strength of the heart's impulse; tone up various varieties of ptosis, remove the symptoms of retro-deviation, and ease the aching venous system—when all this can be done without the knife (remember again the class of cases), you are justified in protesting that there is an important medical side to gynaecology. And especially when all this has frequently to be done after women have been as completely eviscerated as possible.

What Women did before Gynaecology.—When, therefore, one wonders what women did before the specialty began its evolution, one can consider that the requirements of modern life have entailed upon women tendencies that have made the specialty necessary. Former generations, living more in the open air, had greater muscular power and probably required less abdominal surgery.

Discussions upon this new step in gynaecology are valuable even if some of us are on the wrong side, for "truth comes more readily from error than from chaos."

Therapeutical Notes.

Injection for Gonorrhœa in Men.—The *Journal des praticiens* for May 6th gives the following formula:

R Gallobromol 60 grains;
Distilled water, each 1.500 "
Glycerin,

M.

Sodium Cinnamylate in Tuberculous Diseases.—Dr. Lowzki (*Pract.*, 1899, No. 1; *Deutsche Medizinisch-Zeitung*, April 17th) has used a two-and-a-half-per-cent. solution subcutaneously in eight cases. He gives an injection twice a week, injecting at first as much of the solution as it takes to reach to the first mark on a Pravaz syringe, and increasing it gradually to six times that amount. The patient pursues his ordinary occupation during the treatment. The night sweats diminish gradually and finally disappear altogether. Almost all the patients gain flesh. The number of tubercle bacilli in the sputum is reduced—in one case they disappeared entirely—but they generally return subsequently, although in insignificant numbers. Purulent expectoration becomes mucous. The cough is materially mitigated. If the portion of lung tissue affected is small, and there is only moderate fever, improvement, both subjective and objective, is comparatively speedy. In hasty consumption the remedy does no good.

An Antiseptic Dentifrice.—*Lyon médical* for April 9th cites the following formula from the *Bulletin de pharmacie de Lyon* for March:

R Salol 300 parts;
Alcohol 15,000 "
Oil of star-anise, each 50 "
Oil of geranium, each 50 "
Oil of mint 1 part.

M.

A Pill for Gouty Migraine.—Dr. R. Bommier (*Nord médical*, April 15th) recommends this pill:

R Quinine valerianate 30 grains;
Extract of colchicum 9 "
Extract of digitalis 6 "
Powdered acornit leaves 3 "

M. Divide into twenty pills. One to be taken an hour before dinner, for five days in the week, with a glass of lithia water.

A Liniment for Hæmorrhoids.—The *Gazette hebdomadaire de médecine et de chirurgie* for April 20th credits the following formula to Adler:

R Fluid extract of hamamelis,
Fluid extract of hydrastis, each, 16 parts;
Compound tincture of benzoin,
Tincture of belladonna 4 "
Five-per-cent. solution of carbolic
and in olive oil 32 "
M. To be applied two or three times a day

For Chloasma. According to the *Riforma medica* for May 5th, Kaposi recommends:

R Naphthol 30 grains;
Glycerin 15 "
Tincture of green soap 750 "

M.

To be applied locally twice daily

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THE COLUMBUS MEETINGS.

YEAR after year there are more and more satellites to the annual meetings of the American Medical Association. This week, in Columbus, they included meetings of the American Academy of Medicine, the Association of American Medical Editors, the National Confederation of State Medical Examining and Licensing Boards, and the Association of American Medical Colleges. The meetings were all well attended, as was to be expected. That of the American Medical Association was noteworthy, apart from the great number in attendance, for the excellence of the formal addresses. Recognizing the fact that these addresses would sufficiently cover the ground of purely scientific communications, so far as addresses were concerned, the president, Dr. Mathews, wisely read what he himself denominated a "message," rather than an address on any one medical topic, although he dealt most forcibly with plans for restricting the prevalence of tuberculous and syphilitic disease.

It is satisfactory to find that Dr. Mathews favors a "local habitation" for the association, and we have no fault to find with his choice of Washington as the locality, although we have recently favored a number of central cities as places in which the association should meet in turn. Dr. Mathews gives excellent reasons for preferring Washington, and it is undeniable that that city has unexcelled facilities for disposing of visitors. Another matter handled very dextrously by the president was the chronic difficulty over the permanent secretaryship. He suggests that the editor of the association's *Journal* should be, *ex officio*, the secretary. No doubt such an arrangement would conduce powerfully to the best conduct of the affairs of both the association and its *Journal*. In our opinion, the president properly deprecates the clinics, dinners, etc., that now lure so many members away from the sessions. We trust that Dr. Mathews's rebuke to the Antivaccinationists may prove of some avail, but they are a stiff-necked lot, hide-bound by their fad. As a whole, the address was scholarly and eminently practical, and we commend it to all our readers.

SUMMER HEAT AND THE SUMMER DIARRHŒA OF INFANTS.

THAT the influence of summer heat—an undeniable factor in the production of the summer diarrhœa of infants—has often been misinterpreted there can be no doubt. Some who recognize most distinctly that the heat of summer operates more particularly in the ætiology of infantile diarrhœa by favoring deleterious changes in the milk on which the infant subsists can not, nevertheless, overlook altogether the old idea that the summer diarrhœa of infants is a form of "thermic fever" with a special intestinal manifestation. Among these is Dr. Stawell, honorary physician to the outpatient department of the Children's Hospital, Melbourne (*Intercolonial Medical Journal*, March). However, Dr. Stawell agrees with all special observers that summer heat "must be classed only as a remote, predisposing, though very potent factor in the causation of summer diarrhœa." He thinks that wherever the general winter temperature is comparatively high, and the child is acclimatized to it, a summer temperature correspondingly higher than that elsewhere capable of giving rise to a decided increase of mortality from summer diarrhœa is required to produce the same effect. For example, in Queensland, he says, the child gets acclimatized to a high winter temperature, "and must be exposed to a correspondingly higher temperature in summer than the child in Melbourne before diarrhœa comes on." Further, he thinks that if the power of resistance in the individual is very great, "even decomposing food may produce no deadly result; older children, for instance, can drink obviously stale milk without suffering, calves can digest sour milk, and pigs fatten on putrid food."

Nevertheless, Dr. Stawell is a thorough adherent of the doctrine that summer diarrhœa is due to septic changes in the milk taken by the infant. "Broadly speaking," he remarks, "no completely breast-fed infants die from 'summer diarrhœa,'" and this statement he supports by citations of the statistics given by Dr. L. Emmett Holt. In his own hospital experience Dr. Stawell has not met with a single fatal case of summer diarrhœa in an exclusively breast-fed infant, and he believes his colleagues' experience has been the same. "In the country," he says, "there is no summer diarrhœa, or, to put the matter in another way, if the mother of an artificially fed infant has a cow of her own which can be milked twice daily, the summer heat will rarely help to induce intestinal irritation in the infant, and the milk is, of course, given fresh, before heat has induced changes in it." Dr. Stawell's observations in the

Southern Hemisphere are certainly confirmatory of the most trustworthy reports on the subject that we have from physicians of our own quarter of the world, and they are deserving of close attention.

"PARESIS HALL."

WHEN a legislative commission sets about investigating the management of the city of New York, we must presume that it is quite within its sphere to bring out testimony bearing upon matters illustrative rather of the depravity of certain of the inhabitants than of the essentials of municipal government. We are not saying that to demonstrate that vice flourishes openly in the city is not to show laxity or favoritism on the part of the officers of the law, but we fear that such demonstrations can do no good further than to stir up a temporary feeling of horror among the good people of the State that may lead to further repressive legislation, a two-edged sword susceptible of being put to base uses by first one and then the other of the principal political parties, accordingly as the one or the other is in the ascendant for the time being and feels reasonably certain of so continuing.

But, granting that it is judicious to lay bare the rottenness of such resorts as Paresis Hall—a place that seems to be well deserving of its name—there next arises the question of whether or not it is productive of good rather than evil to allow the portraiture to go before the general public. Paresis Hall, it seems, is a resort for certain vicious male individuals who are euphemistically called degenerates. The very existence of such characters is unknown to the better part of the people, or was until the Mazet commission made its inquiry into the conduct of Paresis Hall. In our opinion it had better have remained unknown. It is to be feared that there are multitudes of young men, either resident in New York or visiting here, who will be led by sheer curiosity to take a look at the place or at some other one of the same sort, for we are informed that it is not the only one of its kind, and that access to it, and presumably to the others, is easy to any man. The moral effect must be little short of disastrous. We are aware that the commission can not carry on Star Chamber proceedings; its inquisition must be open to the public if it is to command the people's confidence. The responsibility, therefore, rests with the press. The "yellow" papers, of course, could not be expected to restrain themselves from serving up this horror to their readers, a class, fortunately, which they are incapable of making much worse; but it was to be hoped that the newspapers that are commonly regarded as

"clean" would desist from mentioning such matters, or at least would refer to them only in the most general terms. We regret to see, however, that they have not all followed this wholesome course. Familiarity with vice, even by hearsay, is not edifying to any community.

THE LARYNGOSCOPICAL DIAGNOSIS OF SEX.

WHAT have been felicitously termed the "secondary sexual characteristics" by Bland Sutton seem to be coming more and more into recognition as of importance in medicine. Among them is the voice, and the subject of The Voice in Diagnosis has lately been handled by Dr. Alexander J. C. Skene in a masterly manner in a paper which we publish in this issue. The respective qualities of the masculine and feminine voice depend upon anatomical differences in the larynx in the two sexes. On the strength of a knowledge of these differences Dr. E. Berthold (*Archiv für Laryngologie*, ix, 1, 1899; *Laryngoscope*, May) recently made bold, as the result of a laryngoscopic examination, to question the reputed sex of a person who came to him dressed as a woman. He discovered that the vocal cords were broader and longer than those of a woman, and an examination showed that his suspicion was well founded; the individual had the genitals of the male, although they were misshapen. Subsequently a Röntgen-ray examination showed that the thyroid cartilage had become ossified to an extent that takes place only in the male.

THE PANCREAS AND THE TUBERCLE BACILLUS.

It is probable that the treatment of pulmonary consumption with pancreatic extract, that had some vogue a few years ago, owed whatever efficacy it may have had to its promotion of the digestion of fatty food. Perhaps, however, the pancreas may be made use of more directly in tuberculous disease, if we may draw an inference from certain experiments made by M. P. Carnot (*Thèse de Paris*, 1898; *Centralblatt für innere Medizin*, May 13, 1899), who finds, among other things, that tubercle bacilli injected into the gland, if not in too large quantities, are destroyed.

"EMBALMED" MILK.

THE newspapers report that the people of Omaha are afflicted with a milk supply so altered by the addition of preservatives that the sanitary authorities have felt called upon to warn the citizens of the great danger of feeding infants with the milk. We are not told what chemicals have been used, but there can be no excuse for the use of any as preservatives of the milk provided for a city like Omaha.

THE ESKIMO BRAIN.

AT the recent meeting of the American Medico-psychological Association Dr. Halden presented the results of an examination of the brain of an adult Eskimo, one of several free specimens by Mr. Peary some time ago. The author is reported to have stated that the Eskimo brain was heavier and larger than the average brain of the European of the same stature, the parts particularly developed being those containing

the centres for sight, hearing, and smell. Opportunities for examining the Eskimo brain are not common, but the subject offers an inviting field for research.

A CHANCRE OF THE CONJUNCTIVA.

THE conjunctiva would seem a very unlikely place to find a primary syphilitic sore, yet Dr. E. C. Ellett records, in the *Ophthalmic Record* for June, the case of a man, twenty-four years of age, who had an inflammatory affection of the right eye of about four days' duration, presenting externally the appearance of a moderate-sized chalazion situated at the inner extremity of the upper lid. On everting the lid an ulcer rolled into view. The edges were elevated and whiter than the centre, and the base was firm and unyielding. There was a moderate amount of secretion, no pain, but a stiff, sore feeling, and the surrounding ocular and palpebral conjunctiva was injected. The preauricular gland on the right side was much enlarged and quite hard, and the superficial cervical glands in front of and behind the sterno-mastoid as well. There was no history of possible infection, except that he had often washed his face and hands in hotel lavatories and dried them on the public towel. The diagnosis seemed to be sufficiently plain, and was confirmed by the fact that four weeks from the day of the beginning of the eye trouble a syphilitic roseola appeared on his body. This eruption was quite typical, and there was at this time general adenopathy. The primary sore had hardly changed its appearance. Considering how widespread venereal diseases are, there is undoubtedly a source of danger in the common use of roller towels in public lavatories, which needs as wide recognition as the danger of public drinking cups, etc.

SONG BIRDS AS A SOURCE OF PHTHISIS.

DR. TUCKER WISE (*Lancet*, May 20th) calls attention to the fact that among cage birds, pigeons, and poultry tuberculosis is a common disease, and his attention has been directed to the number of phthisical patients who have lived in contact with diseased canaries and other feathered pets. The dust and filth of the cage can be conveyed by flies to food, and some people even court infection by caressing the birds and allowing them to place their beaks in contact with the lips. Dr. Wise records ten cases in which infection appears to have been derived through birds. He says: "Although doubts have been expressed regarding the identity of avian tuberculosis with that of mammals, Friedberger and Fröhner mention that the more recent investigations of Cadiot, Gilbert, Roger, Fischl, Courmont, and others tend to show that these two forms of tuberculosis are produced by the same species of bacilli, although by different varieties, the differences between them having been produced by differences in their respective modes of nutrition." Dr. Wise's article sounds a warning note to which heed may well be paid for the purpose of further investigation.

THE UNACKNOWLEDGED CLIPPING HABIT.

WE must again call attention to the fact that we are dropping from our exchange list journals which we detect in wholesale clipping, without acknowledgment, from our columns. Accidents, of course, will occasionally occur, but instances are often so flagrant, as in the

case of one journal which we have dropped this month for five such offenses in one number, that they can be only intentional. We are interested in the maintenance of that system of journalistic courtesy which is willing to place the free use of its material for the public good in the hands of editorial *confreires*. But that courtesy, like all others, deserves the acknowledgment which we ourselves consistently endeavor to give, and which we certainly expect.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending June 3, 1899:

DISEASES.	Week ending May 27.		Week ending June 3.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	58	4	13	5
Scarlet fever.....	212	17	214	14
Cerebro-spinal meningitis....	0	7	0	13
Measles.....	404	16	420	19
Diphtheria.....	238	31	249	46
Croup.....	12	4	7	10
Tuberculosis.....	169	141	142	139
Small pox.....	12	3	11	2
Chicken-pox.....	34	0	36	0

Marine-Hospital Service Medical Supplies.—The following circular letter from the office of the supervising surgeon-general, Marine-Hospital Service, dated Washington, June 3, 1899, has been addressed to commissioned officers, acting assistant surgeons, and others concerned:

You are hereby notified that so much of the work of the purveying division of this bureau as pertains to the issuing of medical and other supplies to the various stations under the control of this service has been transferred to New York city, where a purveying depot has been established at No. 378 Washington Street, in the borough of Manhattan. All requisitions for supplies will be addressed as heretofore to this office for approval. Officers in command of stations are requested to withhold, until the beginning of the ensuing fiscal year, requisitions for supplies, except in cases of emergency, in order to reduce the work of the purveying depot to a minimum during its installation.

Contractors for supplies are also notified of this change of address for freight and other shipments. The official address for freight will be "Medical Purveyor, United States Marine-Hospital Service, 378 Washington Street, New York city," and articles hereafter ordered for the use of this service must be shipped in accordance therewith.

[Signed.]

WALTER WYMAN,

Surgeon-General, Marine-Hospital Service.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, June 3d, Dr. James Moores Ball was to read a paper on the Removal of the Superior Cervical Ganglion for Glaucoma, with report of a case. The paper was to be discussed by Dr. Willard Bartlett and Dr. E. C. Renaud and others. Dr. Robert Barclay was to make A Report of Actual Cases Demonstrating the Relief, by Modern Methods, of Patients Hopelessly Afflicted for Many Years with Deafness from Catarrh, Running Ears, Low Speaking Voice,

Dizziness, Noises in the Head and Ears, Worse Hearing in Quiet Places, Aural Distress, etc.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, and plague were reported to the supervising surgeon-general during the week ending June 3, 1899:

Small pox.—United States.

Los Angeles, Cal.	May 27	3 cases.
San Francisco, Cal.	May 19	1 case.
Soldier in Army Hospital.		
Washington, D. C.	May 20	1 death.
Jacksonville, Fla.	May 27	1 case.
West Tampa, City, Fla.	May 20	3 cases.
Savannah, Ga.	May 9-29	13 "
Emporia, Kan.	May 20	3 "
Frankfort, Ky.	May 23	2 "
Louisville, Ky.	May 23 to date	475 " 4 deaths.
Mt. Sterling, Ky.	May 23 to date	2 "
Morgan City, La.	May 21	7 "
New Orleans, La.	May 22-29	9 "
Fall River, Mass.	May 28	10 "
Swampscott, Mass.	May 31	20 " 1 death.
St. Louis, Mo.	May 12-22	12 "
St. Louis, Mo.	May 22-29	4 "
Omaha, Neb.	May 29	1 case.
New York, N. Y.	May 29	3 deaths.
Cleveland, Ohio	May 15-22	13 cases.
Massillon, Ohio.	May 27	1 case.
Johnstown, Pa.	May 15-22	1 "
Philadelphia, Pa.	May 27	29 cases.
Pittsburgh, Pa.	May 26	2 "
Newport News, Va.	May 25-30	9 "
Norfolk, Va.	May 25-30	7 " 1 death.
Portsmouth, Va.	May 25-30	7 "
Seattle, Wash.	May 30	1 case.
Spokane, Wash.	May 20	4 cases.

Small pox.—Foreign.

Sierra Leone, Africa.	Apr. 22-29	40 cases.
Prague, Austria.	May 6-13	2 " 1 death.
Bahia, Brazil.	Apr. 15-30	3 "
Rio de Janeiro, Brazil.	Apr. 7-11	2 " 2 deaths.
Cairo, Egypt.	Apr. 22-29	9 cases.
London, England.	May 6-13	1 death.
Hreslau, Germany.	Apr. 26	Black small pox reported from consular district.
Athens, Greece.	May 6-13	24 cases, 8 deaths.
Calcutta, India.	Apr. 15-22	2 "
Madras, India.	Apr. 22-29	1 death.
Tamsui, Formosa, Japan.	Mar. 11-31	19 "
Naga-aki, Japan.	Apr. 21-30	2 deaths.
Mexico, Mexico.	May 14-21	16 " 8 "
Nuevo Laredo, Mexico.	May 13-20	1 death.
Moscow, Russia.	Apr. 29-May 6	6 "
Odesa, Russia.	May 6-13	3 deaths.
St. Petersburg, Russia.	Apr. 29-May 13	22 " 5 "
Warsaw, Russia.	Apr. 29-May 6	1 death.
Constantinople, Turkey.	May 1-8	2 deaths.
Montevideo, Uruguay.	Apr. 1-8	2 "

Yellow Fever.

Bahia, Brazil.	Apr. 15-30	115 cases, 53 deaths.
Rio de Janeiro, Brazil.	Apr. 7-14	39 " 26 "
Cartagena, Colombia.	May 6-13	1 case, 1 death.
Vera Cruz, Mexico.	May 1-25	151 cases, 104 deaths.

Cholera.

Calcutta, India.	Apr. 15-22	16 deaths.
Yokohama, Japan.	Apr. 14-21	1 case, 1 death.

Plague.

Calcutta, India.	Apr. 15-22	83 deaths.
Tainan, Formosa, Japan.	Apr. 24	24 cases, 18 "
Taiichu, Japan.	Apr. 25	6 "
Taiichu, Japan.	Apr. 25	2 "
Tamsui, Japan.	Mar. 11-Apr. 12	807 " 583 "
Straits Settlements, Penang.	May 27	Plague present.

The American Surgical Association.—At the annual meeting held in Chicago last week officers for the ensuing year were elected as follows: President, Dr. Robert F. Weir, of New York; vice-presidents, Dr. Charles B.

Nancrede, of Ann Arbor, Michigan, and Dr. E. M. Souchon, of New Orleans; secretary, Dr. Herbert L. Burrell, of Boston; recording secretary, Dr. De Forest Willard, of Philadelphia; treasurer, Dr. George R. Fowler, of New York (borough of Brooklyn).

The Buffalo Academy of Medicine.—At the last regular meeting of the Surgical Section, on Tuesday evening, the 6th inst., a paper on Cystitis was presented by Dr. J. Henry Dowd and was discussed by Dr. D. W. Harrington, Dr. W. H. Heath, Dr. John Parmenter, and others. The annual election of officers followed.

Tetanoid Seizures.—Dr. Pierce Clark (*American Journal of Insanity*, April), as the result of a careful study of "tetanoid seizures," says:

"1. The exclusive tonic convulsions of *petit-mal* epileptic fits are not identical with tetanoid seizures. 2. Tetanoid seizures are clinical facts, although very rare; but a distinct classification of epilepsy, the so-called 'tetanoid epilepsy' of Prichard, is not proved. 3. Tetanoid seizures are but a modification of true epilepsy and probably have no relationship to tetanus."

Change of Address.—Dr. Simon Tannenbaum, to No. 9 Clinton Street, New York.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 20 to May 27, 1899:*

PURVIANCE, WILLIAM E., Captain and Assistant Surgeon, will proceed to San Francisco to accompany RAY, P. HENRY, Major, Eighth Infantry, to his station in Alaska.

SHAKESPEARE, EDWARD O., Major and Brigade Surgeon, member of the board of medical officers on the emergency ration, appointed August 18th, is assigned to duty in Washington for an additional period of two months, for the purpose of completing his report.

VAUGHAN, VICTOR C., Major and Division Surgeon, member of the board of medical officers on the emergency ration, appointed August 18th, is assigned to duty in Washington for an additional period of two months, for the purpose of completing his report.

WILSON, WILLIAM H., Captain and Assistant Surgeon, is relieved at the Josiah Simpson General Hospital, Fort Monroe, Virginia, and will proceed to San Francisco for assignment to duty.

Society Meetings for the Coming Week:

MONDAY, June 12th: New York Medico-historical Society (private); New York Ophthalmological Society (private); Gynaecological Society of Boston; Burlington, Vermont, Medical and Surgical Club.

TUESDAY, June 13th: Buffalo Academy of Medicine (Section in Medicine); Rome, New York, Medical Society; Medical Society of the County of Rensselaer, New York; Trenton, New Jersey, Medical Association.

WEDNESDAY, June 14th: New York Pathological Society; American Microscopical Society of the City of New York; Society for Medical Progress, New York; Philadelphia County Medical Society.

THURSDAY, June 15th: New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement.

FRIDAY, June 16th: Baltimore Clinical Society; Chicago Gynaecological Society.

Letters to the Editor.

THE PERIOD OF INCUBATION OF MEASLES.

FRANKFORT, N. Y., June 2, 1899.

To the Editor of the New York Medical Journal:

SIR: In a letter to the *Journal*, May 8th, I called attention to a letter upon this subject from Sara Newcomb Merriek, M. D., published on May 6th, and I then expressed the opinion that the doctor's conclusions were based upon error. Notwithstanding the explanation in a letter of May 27th as to the medium of infection, and the correction of my inference as to the "little sister," I am still of the opinion that the doctor's conclusions, which are based upon this "experiment," are of no scientific value, because possible sources of error have not been properly eliminated. "The period of incubation of measles" is probably as well known as it ever will be. Competent observers are quite well agreed. The London Clinical Society, after painstaking observation and investigation, has placed the "period" at from seven to eighteen days, and oftenest at fourteen days. That means to the first symptoms, or about eighteen days to the beginning of the eruptive stage, which designates the time that we are sure our case is one of measles. In several cases of mild measles recently observed with reference to Koplik's symptom, I often found it absent. There are several important omissions in this report which I will indicate: The length of time that the little sister was sick; whether she had been kept from contact with others; the source of her infection; the existence of the disease in the community to any extent other than this one case; the presence of any suspicious sickness among the sixteen irregular attendants of the school; the attendance of the school children at other places of meeting—church, Sunday school, or parties; the presence in the school at any time prior to this supposed exposure of a "walking case," one in the stage of invasion, or one of the irregular form, which might later on be one of the "immunes." Again, of the cases which left school eight days after exposure we should know more. If the eight days means to the eruptive stage, which is the earliest that we can positively make a diagnosis, the period of incubation would be much less. If it means the beginning of first symptoms, the parents were remarkably well informed and prudent people. With all due respect to Dr. Merriek's ability as an observer, I can come to no other conclusion than that some child infected the school prior to the supposed exposure or "experiment." I agree in the main to the doctor's conclusions, however, based upon the known characteristics, of the disease, rather than the so-called experiment. Infection has undoubtedly been carried on the clothing, but is never carried to the extent that the laity presume. It is very contagious in the early stages, as I have repeatedly observed. In conclusion, I wish to protest against experiments of the kind reported, though I believe this one to have been harmless. It is a serious mistake to expose children to measles, as I have known mothers to do, "to have it over with." It is better never to have it. It is a dangerous belief for a physician to hold that it is a trivial disease. That adults have the disease harder than children can not be proved to be true. Large experience and good diagnostic ability will prove beyond question that even mild cases have a certain amount of fatal complications, and that serious chronic

diseases result much more frequently than was formerly supposed. Physicians should not experiment deliberately along this line, for it is more than dangerous.

GEORGE M. MCCOMBS, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XXII.

RECOVERY OF COMPENSATION.

(Continued from page 792.)

Proof of Claims against Counties, etc.—The manner of proving claims against counties and towns for services rendered to paupers and in performing post-mortem examination and the like differs so materially in the several States, the method being nearly always arranged for by the statutes of the particular States, that it will be unwise to devote the space necessary to a treatment of the subject that would be valuable to residents of all States. The method of proving the value of such services is, however, pretty much the same in all States; we will therefore make an extended examination of the case of Board of Commissioners of Marion County *vs.* Chambers, in which considerable light is thrown upon the subject. In this case Dr. C. was employed by the coroner to conduct a post-mortem examination, for which he filed a claim of \$180. The commissioners allowed him \$105, and from that order he appealed to the superior court, where a verdict was given him for the full amount of his claim. The case was then appealed to the supreme court, which reviewed the trial of the case in the superior court and affirmed the judgment of that court. There being much evidence fully sustaining the value of the doctor's services as charged and allowed, the court confined itself to an examination of alleged errors of the superior court in admitting and rejecting certain evidence.

The counsel for the board of commissioners asked the doctor, "What has been the average daily income from your profession for the two years past?" The doctor's counsel objected to the question, and the court sustained the objection. The supreme court, in passing upon this ruling, said: "Whether the income of the appellee (the physician) was much or little was entirely immaterial. If a surgeon properly performs a surgical operation he is entitled to recover the reasonable value of his services, neither more nor less, whether his professional income be ten or ten thousand dollars a year. The value of the services can not be measured by the professional income of any series of years. If the physician or surgeon possesses the requisite skill and knowledge, and exercises such knowledge and skill properly, he is entitled to be paid the reasonable value of services rendered by him, irrespective of the question of his yearly professional income." The plaintiff produced two physicians and surgeons to testify in his behalf as to the value of the services performed; these witnesses testified upon their examination in chief that they were physicians and surgeons, and that they were competent to testify to the value of services rendered in making post-mortem examination; but, on cross-exami-

nation, one of them said: "I don't know what physicians have charged for making post-mortems for the county; I know nothing of the prices at which services can be procured; I judge from what I think it would be worth." The other witness said upon cross-examination: "I have never made examinations for the county; my testimony is based upon all the circumstances. I base my opinion on what I think is the value of such services, irrespective of the price charged or paid." The counsel for the board of commissioners then asked to have the testimony of these witnesses stricken out, which the trial court refused to do. The supreme court said: "No error was committed in overruling appellant's motion. The testimony was competent, for the witnesses were shown to be experts, and to possess such knowledge, skill, and acquaintance with the subject under investigation as entitled them to express their opinions to the jury. They may have had some knowledge of the value of such services, without knowing anything at all about what others were charging for like services. . . . It is clear, from the statements of the witnesses, that they were skilled in their professions, and that they did have sufficient acquaintance with the nature and value of services rendered in post-mortem examinations to entitle their opinion to go in evidence." The board of commissioners' counsel put the question to one of the members of the board: "At what price could you have procured competent physicians to make post-mortem examinations during the years 1877 and 1878?" The physician's counsel objected to the question, and his objection was sustained. Upon the correctness of this ruling the supreme court said: "The question in issue was, not what others would have done the work for, but what was the reasonable value of the services of appellee (the physician). It was no more competent for the appellant (the board) to introduce the offered evidence than it would have been for the appellee to prove that any other surgeon would have charged twice as much as the sum claimed by the appellee. It was competent for appellant to call competent witnesses to give their opinions of the value of the services, but not to prove particular bargains or offers."*

In States where the statutes authorize the board having charge of the particular matter to limit the amount of relief to be furnished, such board may, before the relief is furnished or services rendered, establish a limit, but where no such limit has been established, the board must allow the reasonable value of the services rendered.†

In passing from the subject of presenting and proving claims against towns, counties, etc., it is relevant to say that a doctor who has rendered services to a poor person, and has presented his bill for the same to the proper officer of the municipality, is barred by the auditing and allowing of such bill from ever collecting the same from the patient, and it makes no difference whether the bill is allowed at its face or at a reduced valuation‡.

Defense. The physician having shown his employment, established the fact that the services were rendered, and proved the value of those services, it then becomes incumbent upon the patient to show some just

reason why he should not pay, and, if he fails in this, judgment will be rendered against him. Experience has shown that the human mind is very fruitful in devising excuses and discovering reasons for avoiding obligations; it therefore usually happens that the defendant has a defense. Perhaps the most common defense, when the suit is between the physician and patient, is that of general denial, which simply necessitates the strict proof that the services were rendered as alleged, and that they are of the value claimed. Frequently the defendant produces witnesses, who, it has been heretofore shown, must be physicians, to prove that the services are of a less value than that claimed. In such a case the plaintiff should be careful to secure as his witnesses men of good professional standing whose judgment is esteemed and integrity undoubted. The defense has been interposed that, excepting for those visits specially requested, the patient is not liable unless the physician shows some reasonable necessity for the additional visits. This defense has no legal weight; a physician, being employed to attend a patient, is the proper and the best judge of the number and frequency of visits necessary, and, in the absence of proof to the contrary, the court will presume that all professional visits made were deemed necessary and were properly made. Justice Temple, of the supreme court of California, said: "It would be a dangerous doctrine for the sick to require a physician to be able to prove the necessity of each visit before he can recover for his services. This is necessarily a matter of judgment, and one concerning which no one, save the attendant physician, can decide. It depends not only upon the condition of the patient, but, in some degree, upon the course of treatment adopted."*

In the case of *Jeffries vs. Harris* the defendant attempted to show the character of the physician, but was not permitted to do so. The court said: "Character was not put in issue by the nature of this action, and the defendant is equally liable on his assumption, whether the plaintiff's character were good or bad; for, if he chose to employ him as a physician, it is not competent to him, afterward, to say that he is not a good one, and, therefore, that he will not pay him. If, indeed, the plaintiff had imposed on the defendant by false pretensions to skill, he would have been responsible for any injury done him; but, in this case, the plaintiff is entitled to compensation for skill and labor, whatever they may be."‡

A very common sort of defense is that in which the defendant admits the rendering of the services but claims that they were so unskillfully rendered as to be injurious; and frequently he files a counter-claim for damages resulting from such unskillful or negligent treatment. The constant recurrence of cases in which this sort of defense is interposed will justify a careful examination of the law governing the proof. Many of the trial courts seem to have been of the opinion that when a patient pleaded as a defense to a physician's suit to recover compensation for professional services that such services were not rendered with skill, this plea immediately cast the burden upon the physician of showing by a fair preponderance of evidence that the services rendered by him were performed with all necessary or required skill. The courts of last resort have, however, universally declared this to be a mistaken view, they holding the law to be that where the physician has made

* *The Board of Commissioners of Marion County vs. Chandler*, 15 Ind., 409.

† *Hunter vs. Jasper Co.*, 40 Ky., 569.

‡ *Wood vs. Wilson*, 70 Hun., 168; 24 N. Y. Supp., 287. See *N. Y. Medical Journal*, May 13th, p. 692.

* *Endre vs. Meares*, 40 Cal., 37.

‡ *Jeffries vs. Harris*, 1 Hawk (N. C.), 195.

a *prima-facie* case by proving his professional character, his employment by the defendants, the rendition of the services and their value, he is entitled to judgment unless the defendant can show by competent evidence that he has been guilty of negligence or want of proper skill in treating the particular patient.* Nor will the fact that a patient grew worse under the plaintiff's treatment and grew better after he was discharged show that the physician was guilty of negligence or unskillfulness in treating him. To illustrate more fully and show the character of evidence required, a quotation is taken from a case in point: The patient in this case had sustained a serious injury by the explosion of a dynamite cartridge and the plaintiff had been called as a specialist to treat his eyes and ears. The defense interposed was that of improper treatment. In commenting upon the evidence offered to establish this defense the court said: "It is claimed that the plaintiff improperly applied and used a tube of hot water over the nose to cure the ailment or injury to his eyes; that the heat was so great as to be injurious. Other physicians were in attendance on the patient, but their evidence was not produced. No surgical or medical witness was called by the defendant to say that the treatment was improper or negligent in the least degree, whatever uneducated persons or non-experts might conjecture on the subject. The plaintiff could not be convicted of malpractice on such evidence. He could not be held responsible simply because he failed to cure the defendant's son, nor for mere misjudgment in treating him, if the treatment was such as a physician and surgeon of ordinary knowledge and skill would apply."†

Nor is it a valid defense to a suit by a physician to recover the value of his services to show that the nurses in the hospital to which the patient went upon the physician's advice were negligent or careless, it not being shown that the physician was proprietor or manager of the hospital.‡

Drunkness is also sometimes pleaded as a defense to such an action. If a physician who is called to attend a patient is in such an intoxicated condition as to be unable to fulfill the duties of his profession, this is not only a complete defense to an action commenced to recover compensation for those particular services, but there is, under the law of some States, a criminal liability involved. If, however, a patient, after the doctor has treated him in an intoxicated condition, continues to send for or employ him, he will be held to have waived all objection to his habits of intoxication and will not be permitted to plead such a defense."

Effect of Judgment for Recovery of Fee.—A judgment being entered in favor of the physician in a suit commenced by him to recover the value of his professional services, it is interesting and valuable as well to inquire what effect such a judgment will have upon a possible right of action against him and in favor of the patient growing out of unskillfulness in the performance of the same services for which he has just recovered. It is a general principle of law that a judgment of a court of concurrent jurisdiction directly upon a point is a bar to an action upon the same point and between the same parties in another suit.

The appellate court of New York has applied this doctrine to its full extent. In this instance suit had been commenced by a patient to recover damages, laying the amount at five thousand dollars, from his physician for unskillful and negligent treatment of a dislocated elbow and fractured arm. The physician then commenced an action before a justice of the peace to recover the value of his services in the treatment complained of from the patient, who was plaintiff in the malpractice suit. The patient appeared in the suit instituted before the justice of the peace for the recovery of fees, but interposed no defense, and judgment was entered against him to the amount of six dollars and fifty-eight cents. The physician, then, as a defense to the patient's action for damages from malpractice, set up the judgment rendered by the justice of the peace. Upon the principle above given the supreme court, and afterward the court of appeals, held that the judgment of the justice was a complete bar to the action for damages.* The courts of West Virginia have declared themselves in harmony with this decision;† so also have those of New Jersey‡ and Arkansas.§ The contrary view has, however, been taken by the courts of Indiana,|| Ohio,¶ and Wisconsin.⦿

(To be continued.)

Pith of Current Literature.

Cocainized Chloride of Ethyl for Local Anæsthesia.

—M. G. Milian (*Revue médicale*, May 24th) speaks highly of hydrochloride of cocaine in one-, two-, three-, four-, or five-per-cent. solution in chloride of ethyl in tubes similar to those widely used for the ethyl alone. Eucaine could also be used in the same way, but did not appear to be so efficient as cocaine. In this method the chloride of ethyl is not used for refrigerating purposes, but simply as the vehicle of the cocaine, removing the fats from the skin, penetrating the superficial cellular layers thereof, and depositing the cocaine in their interstices. The advantages claimed for this proceeding are the obviating of hypodermic injection and the lessened liability to cocaine intoxication. Moreover, it can be used with the thermal cautery, since the operation is not begun till after all the ethyl chloride is evaporated. The application may take place either by a pledget of cotton saturated with the medicament, specially serviceable when the part to be anæsthetized is deep-seated or inaccessible, or it is desired to avoid affecting contiguous parts; or by atomization. Anæsthesia is obtained in about five or six minutes.

Examination of the Spleen.—James Cantlie, F. R. C. S. (*Clinical Journal*, March 1st; *Medical and Surgical Review of Reviews*, April), says that in the usual position, with the patient lying on the back, by palpation and percussion it is easy to find the spleen when greatly enlarged; but when of normal size, or even moderately big, it is impossible to determine, even ap-

* Gates vs. Preston, 41 N. Y., 113.

† Lawson vs. Conway, W. Va., 16 S. E. Rep., 564.

‡ Ely vs. Wilbur, 19 N. J. L., 685.

§ Dale vs. Donaldson Lumber Co., 48 Ark., 188.

|| Globe vs. Dillon, 86 Ind., 327.

¶ Saper vs. Bonner, 1 Conn. R., 464.

⦿ Ressequier vs. Byers, 52 Wis., 650.

* Robinson vs. Campbell, 17 Ia., 625; Styles vs. Tyler, 64 Conn., 432; Baird vs. Morford, 29 Ia., 531; Wooster vs. Paige, 1 Pac. Coast L. J., 324.

† Wurdemann vs. Barnes, 92 Wis., 296; 66 N. W. Rep., 111.

‡ Baker vs. Wentworth, 155 Mass., 338; 29 N. E. Rep., 589.

§ McKleroy vs. Sewell, 73 Ga., 657.

proximately, its exact position or size. The spleen is regarded as presenting relations with the anterior aspect of the abdomen, but this is a fallacy. It is situated far back in the hollow of the ribs, being accommodated in the angles of the ninth, tenth, and eleventh. The long axis runs parallel with the tenth—"the splenic rib"—and the inner (upper) end of the organ reaches to the head of the rib. The outer (lower) end of the spleen comes no farther forward than the posterior axillary line, so that to attempt to percuss out the spleen from the front with the patient supine is, in the case of the normal spleen, an absurdity. With the patient in the horizontal position and rolled over on the right side, fallacious signs will also result as the organ moves forward with the altered position of the body. Again, with the patient prone it is impossible to percuss out the spleen from the back, as it leaves its position (unless adherent from old perisplenitis) and rolls forward to the anterior part of the abdomen. It is therefore only when the body is in the erect position that the spleen can be percussed out properly, for the organ is only then maintained in its normal position. The spleen does not descend when the erect or sitting position is assumed.

Tuberculosis of the Symphysis Pubis.—M. von Bünchner (*Annales de chirurgie et d'orthopédie*, April) has reported a case of tuberculosis of the symphysis pubis in a woman of fifty-seven who was cured by operation. M. Bünchner says that the few recorded cases present a uniform clinical picture. The affection begins with inguinal pains of neuralgic character; then, after a lapse of time, an abscess forms in the hypogastrium behind the abdominal muscles. This abscess leads to the formation of fistule, sometimes in the pubic, sometimes in the perineal region. The swelling resulting from this abscess has been confounded with hernia or lipoma. Prognosis is favorable not only as regards cure, but also from a functional point of view.

Xeroform in Corneal Ulcer.—Marcinowski (*Therapeutische Monatshfte*, xii, 38; *Canada Lancet*, May) finds that xeroform is much preferable to iodoform in the treatment of corneal ulcer. Having succeeded with xeroform in a case which had previously given bad results with iodoform, he has since relied solely upon the former, with uniformly good results, both in ulcerations and in dressings for corneal injuries. Wounds heal quickly under its influence without leaving a scar.

The Relation of the Nervous System to Albuminuria.—Dr. J. H. Brownlow (*Albany Medical Annals*, May), in concluding an interesting paper, says that overstimulation, irritation, or lesion to portions of the floor of the fourth ventricle of the brain, or the fibres passing from its immediate vicinity, at once affect the circulation of the kidneys; and if persistent and severe, are quickly followed by all the pathogenic evidences of acute albuminuria. In the initial stage, particularly in the chronic form, our attention should be early directed to the nervous system, if we hope to arrest its development. Indispensable to success in the treatment of the disease is a correct knowledge of its etiology and pathology. The prodromata of parenchymatous and interstitial nephritis evidence themselves in a most direct and positive manner in disturbances and derangements of the whole nervous system. At every stage, from the initial to the final, the varied series of nervous manifestations, renal and arterial pathological conditions, if

properly interpreted, clearly and unmistakably point, in the author's opinion, to a nervous origin. In conclusion, he draws the following inferences:

That all the alleged causes of acute albuminuria, with the exception of the toxins of scarlet fever and diphtheria, are devoid of specific pathogenic power and should not be accepted.

That the opinion of leading authorities that these toxins primarily act on the tissue elements of the kidneys, causing inflammation of these organs and resulting in acute or chronic albuminuria, is unwarranted, and is controverted by anatomical and physiological principles.

That in the highly organized and susceptible nervous system, with its primary, perpetual, and controlling dominion over metabolism, is to be found the primary morbid process from which all the other grosser lesions are the direct result.

That, as in acute albuminuria the true aetiological factors are the *toxines* of scarlet fever and diphtheria, so in the chronic form *auto-toxines* are the active pathogenic factors, and their specific action is primarily evidenced on the nervous system.

That severe mental strain, intense worry, deep and profound sorrow, the silent grief of domestic and financial misfortune, are the most active predisposing causes in albuminuria.

That the obscure and constant nervous manifestations are more reasonably accounted for on this theory than upon any other.

That the pathological conditions found in the renal organs, arterial system, brain, spinal cord, and sympathetic ganglia are local manifestations of a deranged and diseased nervous system, developed by auto-intoxication and resulting in deranged metabolism.

To Control Epistaxis.—Dr. Boyd Cornick (*Canada Lancet*, May) says that all that he has found necessary has been to fashion with a pair of scissors a dry plug of prepared sponge, in size and length comparable with the little finger of a twelve-year-old boy. This should be carefully soaked in boiled water to free it of grit, squeezed dry to free it of unnecessary fluid, and inserted its full length, gently, along the floor of the bleeding nostril. No styptic is necessary; it would be needlessly irritant. The expansive pressure of the soft sponge against the bleeding site, increased by the coagulation of a few drops of blood in its interstices, will check the bleeding at once. It should be removed in twelve hours, and under no circumstances should it remain longer than twenty-four. Melted vasoline containing 0.5 per cent. of carbolic acid, applied with a medicine dropper in liberal quantities, is the only local treatment called for afterward.

Aphasia from an Unusual Cause. Dr. A. Ferree Witmer (*Philadelphia Polylinic*, supplemental number, January), in a communication recently presented to the Philadelphia County Medical Society, remarked that from certain facts previously enumerated there grew up the conception of the zone of language comprising (1) Broca's convolution, lesion of which caused inability to remember movements necessary for articulation; (2) the superior temporal convolution, lesion of which caused inability to understand spoken words; and (3) the angular convolution, lesion of which caused inability to interpret words that could be seen. These three collections of cells, or centres, were connected by fibres

known as association tracts. It would be seen, therefore, that the subject of aphasia could be conveniently studied under five headings:

1. True aphasia. 2. Motor aphasia. 3. Sensory aphasia. 4. Associative aphasia. 5. That due to combined conditions. True or intellectual aphasia would follow upon a lesion in any one of the three areas already outlined. It had been proposed to call this form aphasia of apperception. By this term was meant the combination of central excitation with any incoming sensory stimulation before that stimulation aroused such excitation in the cerebral cortex as to bring into consciousness a complete perception. A more descriptive term for lesion in any of these three brain areas would, in the writer's opinion, be central aphasia.

This central form of aphasia held a median position between the cephalad fibres, known as sensory tracts, and those caudad, known as motor tracts.

When all three of these brain areas were involved the condition was called complete aphasia. Associative aphasia resulted from the disturbance of connection between the parts comprising the central structures.

Combined aphasia was, as its name suggested, a combination of two or more of the above forms in one individual.

The author then presented a patient on whom he remarked as follows:

"You will notice that he correctly interprets the sounds that he hears, that he reads understandingly, and that muscle movements, although stilly, are correctly performed. We can, therefore, exclude the superior temporal, the angular, and Broca's convolutions from participation in the lesions. Dependent upon the association tract involved, different terms are employed to express the disturbed function; thus, when the tract between the auditory area and Broca's convolution is disorganized, the condition is spoken of as paraphasia, etc. As the patient readily and correctly coordinates the different centres forming the zone of language, we can exclude a lesion of the association tracts. You will, I think, agree that the patient attempts to speak when directed—i. e., the sensory tract is intact.

"But you have also noticed that his attempts to speak are frequently abortive. It would seem, therefore, that we are dealing with a condition known properly as motor aphasia. The history of this patient until his eighth year was uneventful; from that time, however, without apparent cause, he was seized with convulsions of the *grand-mal* type, which recurred at monthly intervals until last January, when he went into the status epilepticus and remained unconscious for three hours. On the following day the entire right side was found to be paralyzed and speech lost. Improvement since then has been slow but continuous, the face, trunk, leg, arm, and speech improving in the order named. The site of the lesion is doubtless in that part of the brain most frequently involved in cerebral hemorrhage, the knee and posterior limb of the internal capsule. Since January the boy has had but one convulsion, the movements in which were generalized. Examination of the heart is negative; there is no history of luetic infection; knee, elbow, and wrist jerks in the right accentuated. Inquiry into the family history on the maternal side gives a line of goitrous ancestors, the mother and grandmother of the patient being afflicted with this affection. On the paternal side we find a grandfather who became insane at about the middle of life. It is highly probable, therefore, that the boy has inherited an unstable

nervous system, which at the time of puberty and under the additional stress of a series of convulsive seizures gave way."

Nitroglycerin in Hæmoptysis.—Flick (*Centralblatt für innere Medizin*, 1898, No. 27; *Annali di farmacoterapia e clinica*, January and February, 1899) has treated very successfully three cases of hæmoptysis that were resistant to all ordinary measures with very small doses of nitroglycerin.

Gangrene of Lung Treated by Creosote Vapor.—Dr. W. Devereux (*British Medical Journal*, March 4th) reports the case of a boy, aged eleven years, admitted to the Tewkesbury Hospital with signs of consolidation of the left lung throughout the axillary region, accompanied by hectic, perspiration, and other clinical symptoms of phthisis. On June 13th there was a sudden change in the quantity and character of the expectoration. It increased to half a pint in the twenty-four hours. It was watery and opaque, with a greenish tinge, slightly streaked with blood, and lumpy. It did not coagulate on boiling. On microscopical examination an abundance of pus cells was found, but no lung tissue or tubercle bacilli. The smell, especially during an attack of coughing, was horribly fetid. On auscultation over the dull area, physical signs of a large cavity were found.

It was determined on June 20th to try the inhalation of coal-tar creosote vapor. A small room, connected with the hospital by a porch, was used, the fireplace and window being rendered as air-tight as possible, and the creosote vaporized in a metal dish over a spirit lamp. The patient was provided with plugs for the nose and watch glasses for the eyes. The vapor at first aggravated the coughing, and the patient brought up a large quantity of watery sputum, but after ten minutes the cough diminished, and he felt much easier. At the end of twenty minutes the boy felt weaker, and was taken back to bed, when he again expectorated a large quantity of sputum.

During the next week the inhalations were continued, each lasting from ten to fifteen minutes. His general condition showed considerable improvement, the factor of the breath ceased, and the cavity in the left lung showed signs of diminishing.

On June 28th the patient went out of doors. By July 4th he had gained three pounds and a half in weight. The inhalations were continued daily till July 30th.

The patient was discharged on August 3d, the dullness having greatly diminished. He was seen again on his return from the convalescent home on August 17th, when he looked extremely well; he had gained fourteen pounds and a half, and the physical signs in the lung had completely disappeared.

The Treatment of Exophthalmic Goitre with Sulphate of Quinine.—The *Therapist* for May 15th, citing the *Journal de médecine interne* for December 15, 1898, says that Paulsøe agrees with Reynier that exophthalmic goitre is not, properly speaking, a disease of the thyroid gland, but a disease of the blood-vessel system, a vasodilatation, causing cerebral congestion, with an increased activity of the thyroid gland, and other reflex symptoms. In the treatment of this trouble a vasoconstrictor is called for, and one meeting the requirements better than all others is sulphate of quinine. He reports three cases, one in detail; all were greatly benefited by the treatment.

Proceedings of Societies.

BROOKLYN MEDICAL SOCIETY.

Meeting of March 17, 1899.

The President, Dr. JACOB FURS, in the Chair.

The Voice in Diagnosis.—This was the title of a paper read by Dr. ALEXANDER J. C. SKENE. (See page 809.)

Dr. JOSEPH MEYER said it was not often that one had the pleasure of hearing so interesting a paper as that read by Dr. Skene.

He had left very little room indeed for discussion—in fact, so thoroughly exhausted was the subject that, to those who had not had the opportunities to read and learn these things as completely as the doctor had done, especially with regard to the emotional, psychical, and psychopathological characteristics of the human voice, the paper's importance was apparent.

The speaker cited the histories of a few cases which were interesting on account of their rarity. First he alluded to the condition of apathy referred to as a prognostic sign. In peritonitis following operation, and in diseases of the pelvic organs, he always regarded the condition of apathy as a bad sign.

He cited the case of a young lad who had lost his voice during an attack of whooping-cough. A complete examination of his larynx had revealed no visible cause. The defect had been due to a central lesion, and he had improved under treatment.

Another was a case of bradylalia in a man thirty-two years old, in whom the defective speech had been the means of making an early diagnosis of paresis, of which the man had died two years later.

Still another case was one of aphonia and dyspnea due to a calcified lymphatic gland near the bifurcation of the trachea, which had caused a perforating ulcer of the trachea. Laryngeal examination had been almost impossible on account of the inability of the patient to remain in an upright position. The patient had been removed to a hospital in a suffocating condition, and tracheotomy had been performed by the house surgeon. The breathing had improved slightly, but the patient had died the next day. At the post-mortem, a hole about a quarter of an inch in width had been found in the trachea. The wall had been very much thickened about it. The air had passed into the mediastinum and cellular tissue of the neck and chest. There had been no sign of abscess. There was no reference to such cases that he could remember, except a few described by von Ziemssen.

In a case referred to the speaker by Dr. Beasley, that of a boy aged seventeen years, he had found a defect in the voice which had been traced directly to a congenital bony occlusion of the posterior nares. There had been also in this case an absence of the entrance of the Eustachian tubes and absence or loss of both drum membranes. His hearing had been W. R. 1'; L. 5'. It had been almost impossible to understand the patient's speech. After a passage had been opened in the posterior end of the septum and also into the vault his speech had become normal after practice.

Dr. Meyer thought that many defects in speech in the young were due to bad or careless teaching. The facts which had lasted for years were sometime corrected in a short while. While reading a paper on speech defects, Dr. H. Riedel, who was quite a linguist, alleged that he could pronounce the letter *r* only as a gut

tural; in a short time the speaker had taught him to pronounce it as a linguopalatal.

Then, again, there were conditions due to paralysis of the soft palate following diphtheria, and ulceration and destruction of the palate altered the voice materially. There was also quite a marked change in the voice when adenoids were present.

Dr. A. C. BRUSH said that every one received two educations in this world—one which was taught to him, and the other which he taught himself. The latter was by far the more valuable. Dr. Skene's paper belonged to this class, and treated of a subject which had not received the attention it deserved. As he had said, the voice might present well-marked changes in the various forms of insanity. In mania, for example, it was rapid and continuous, the subject being frequently changed in the middle of a sentence, with failure to answer questions, incoherency, and irrelevant ejaculations. It was, as a rule, loud and high-pitched, and corresponded to the characters which the doctor had described as those of sorrow. This change in the voice was often of value in distinguishing between melancholia and the depressed form of paranoia, especially before the delusions of persecution had taken definite shape. The paranoiac talked naturally and his voice would correspond to the amount of joy or anger or depression which, at the time, dominated his field of consciousness. In general paresis the voice changes were often among the first, and frequently preceded the other signs, and, therefore, were of great value. The close resemblance between the early stages of paresis and neurasthenia were well known, but they presented this difference in speech: Patients in both groups were apt to talk rapidly and leave out and misplace words, but the neurasthenic recognized his mistakes and corrected them, the parietic did not. The tremor of the lips and tongue, when present, added an indistinctness to the parietic's speech which was very characteristic. In hysteria we often found voice changes of a paralytic or emotional character. The most frequent in the speaker's experience was a complete aphonia and a high-pitched nasal voice. In the organic affections we also found some well-marked changes. In multiple sclerosis the patients frequently spoke in a slow, monotonous manner, making a distinct separation between syllables, and, from the tremor of the lips or tongue, the speech was thick. In bulbar paralysis the earliest signs were often those due to loss of power in the lips and tongue, and consequently there was an inability to pronounce the letters *p*, *m*, *b*, *s*, and *t* properly. In cerebral hemorrhage, thrombosis, and embolism, the voice frequently presented the changes due to the various forms of aphasia or paralytic conditions of the larynx. The speaker felt that he could only touch upon the surface of such a vast subject, as Dr. Skene had so ably laid it before them, and he was glad to have had the privilege of hearing a paper which was certainly one of the most valuable contributions to modern medicine.

Dr. PETER SCOTT stated that Dr. Skene's remarks about partial aphonia reminded him of a case that he thought worth while mentioning. It was one of hysterical aphonia in a young woman who had been brought from the west coast of Scotland to the east coast, where he had been in practice at that time. The east coast of Scotland was more bracing and clear than the west, which was so often enveloped in rain-fogs. The patient had not been long under his care before one or two things were noticed: First, that she would sing in church in a high-pitched voice; second, that, being very fond

of babies and children, she would sit and sing or "croon" to the baby, also in a high-pitched voice; and that when she laughed, vocal sounds were produced. Otherwise all conversation was carried on in a whisper, and that with apparent effort. Making use of these facts, the speaker had taken her to the piano, and had struck a note quite above the ordinary conversational pitch, and had kept her reading at that pitch, all the time striking the note on the piano. Then, coming down half a tone, a few other lines were read at that pitch, and so on. With that kind of vocal gymnastics the speaker had expected to bring her down to being able to read at a pitch suitable for ordinary conversation. During the first week he had found that the voice broke at a certain note on the scale; he could not state just exactly what note it was, but remembered that it was near the point where musicians said the middle register changed into the upper register. He had thought it strange at the time that that part of the vocal apparatus which was most used, and was usually the strongest, should have suffered from loss of nerve power, while the part used to produce tones in the upper register, which was not usually the strongest part of the voice, should have retained its power.

Two or three weeks of this vocal gymnastics had brought the voice back to the middle register. Of course, other treatment had been helping the voice also.

Dr. JAMES J. BOWEN thought it a happy privilege to listen to a paper which, he said, was one of the kind that served as milestones in the progress of medicine. Dr. Skene had thrown open the doors of an unexplored field, and, with an elegance and modesty characterizing him thoroughly, had told of his personal observations in this line during his long and busy career.

Papers of this character had always been the signal-bell for deep investigation. Coming as it did from such an eminent source, he felt sure that when Dr. Skene's paper was copied and translated into other languages, and presented to the men of medicine throughout the world, the result to scientists would be as gratifying as the result of Czerniak's paper on adenoids had been some years ago. Then the medical world had been rife with expectation as to what discoveries might have been made in the then new field, and the eagerness and alacrity with which the subject had been cleared up was, Dr. Bowen said, a standing tribute to the medical profession. He hoped that the subject that had been brought before them so eloquently would soon be divested of its mysteries; that diagnosticians might have a clear, unclouded conception of what these voice changes meant.

To none in the medical profession was this subject of more interest and value than to those who were interested in the nose and throat. Its value to the neurologist, the surgeon, and the general practitioner had been well explained. To one who was at all observant these voice changes were pathognomonic in many affections. The tone and pitch of the voice were considerably altered in nasal obstruction from hypertrophied turbinate bones, polypi, deviated septa, or any abnormality. In adenoids the character of the voice told its own story. In laryngeal affections the hoarse, harsh quality of the voice told of a constitutional disease. Where there was an absence of the soft or hard palate, due to disease or other cause, the voice was peculiar in its resonance, enough so to enable the physician to tell without examination just what the condition was. And so with many other affections of the nose and throat which had a peculiar deflection of the voice which, when once heard,

was ever after easily recognized. When we found a patient with a voice that appeared to be high-pitched, dead, or muffled, overresonant or hoarse, the nose, throat, and larynx should be examined, and, if no primary cause was found, there would be found at least something that would guide the physician to a correct diagnosis, maybe, before symptoms of greater importance or danger had manifested themselves. He had frequently identified patients in the clinics by some characteristic of their voice when, after an absence of a year or more, they returned for treatment.

Would the breaking of the voice ever be explained? he asked. Why was there a change of quality or something in the same note when sung in one register going up and in another coming down? Should we some day thoroughly understand the speaking voice, the singing voice, the voice crying, and the voice laughing?

The voice was music produced by the most delicate of musical contrivances, the larynx, differing only in its qualities from any other musical instrument; and, as we imparted different emotions or impressions by the varied uses of that voice, why could we not study the possibility of using other more common musical instruments for the same purpose, and thus commune with the mute, with the birds, and with all animals which were as susceptible as, if not more so than, we to musical vibrations? These questions, he hoped, would be answered when the investigation which Dr. Skene had the honor and good fortune to start was finished; then the world would thank the society for the paper, and in particular its able and eminent author Dr. Skene.

Dr. SKENE said that the discussion of his paper reminded him of his experience in consultation with his professional brethren in the past, in which he had always received more than he had given.

He felt conscious of his lack of knowledge regarding the voice changes in diseases of the voice-producing organs and of the brain and nervous system, and he thought that this deficiency had been met by the remarks of Dr. Meyer, Dr. Bowen, and Dr. Brush. Their contributions were certainly of the greatest possible value, and gave that completeness to the paper in this department which, he said, was very much needed. He had been deeply interested in the remarks of Dr. Brush upon the voice changes in mental depression and brain diseases. He had long been conscious that the voice was modified in these affections, but to what extent and in what direction he had had no opportunity of discovering.

The case related by Dr. Scott brought out, he thought, a portion of the subject which he had entirely overlooked in composing his paper—viz., the liability of the breaking of the voice in running from one register to another. This had been known to occur in some of the most talented and cultivated voices. One of our most celebrated singers suffered from this defect or accident, which would sometimes occur in spite of all her culture and great care to avoid it. He had never heard of a case so marked as the one related by Dr. Scott, and he was sure that we were on the right road to discover the cause of this breaking.

Dr. SKENE said that when selecting this subject for consideration he had been guided by a full assurance that, although there had not been much said of the subject in our literature, there was a great deal of valuable knowledge scattered among the medical profession, and he had hoped, in calling attention to this subject, to gather in from the members of the society some most valuable information, and he had not been disappointed.

Book Notices.

Vaccination: its Natural History and Pathology. Being the Milroy Lectures for 1898 delivered before the Royal College of Physicians of London. By S. MONCKTON COPEMAN, M. A., M. D. Cantab., M. R. C. P. Lond., Medical Inspector to her Majesty's Local Government Board, etc. London and New York: The Macmillan Company, 1899. Pp. x-257. [Price, \$2.]

A MORE able and excellent treatise than the work before us it would be difficult to imagine. The individuality of the subject and its distinctiveness both contribute to the result in the hands of such a writer as Dr. Copeman, and nobody will read his historical introduction without feeling that the subject has acquired a new interest.

From the historical the treatise passes to the pathology of vaccinia, and chapter ii takes up the relationship between that disease and small-pox. In the third chapter is most interestingly described the history of various lymph stocks, and in the fourth and fifth chapters respectively the histology and the bacteriology of vaccinia are treated of. A brief though interesting chapter (the seventh) deals with the antitoxic treatment of human variola, and concludes with an expression of doubt as to the future of the practice until cultivation outside the body is possible with the microbe of variola.

The concluding chapter is devoted to glycerinated lymph, and the subjects of the preparation and storage of vaccine are continued in an appendix. The work, as its title implies, is essentially non-clinical, but for the histology and pathology of vaccination we do not know its superior.

Practical Materia Medica for Nurses. With an Appendix containing Poisons and their Antidotes, with Poison Emergencies; Mineral Waters; Weights and Measures; Dose List; and a Glossary of the Terms used in Materia Medica and Therapeutics. By EMILY A. M. STONEY, Late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Massachusetts, etc. Philadelphia: W. B. Saunders, 1899. Pp. 5 to 306. [Price, \$1.50.]

THIS work is no more and no less than a much abridged materia medica, and we are at a loss to discover wherein lie its peculiar advantages "for nurses" as compared with a host of the smaller and well-known works upon the same subject. As we have many times said, we are not of those who esteem highly the teaching of a difficult subject by much condensation and epitomizing. As an example of the much-attenuated text-book, however, the volume under discussion is not ill prepared.

The first part of the book is introductory and concerns pharmacological classification; the second presents drugs, their sources, action and uses, and doses and toxicology, all much abbreviated. The third section treats of poisons, antidotes, emetics, mineral waters, weights and measures, doses, etc. As we have said already, the book is the equal of most of its kind.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By J. McLELL BUECH, M. A. Aberd., M. D. Lond., Fellow of

the Royal College of Physicians of London, etc. Philadelphia: Lea Brothers & Co., 1899. Pp. xii-609. [Price, \$1.50.]

THIS work commands our high regard; indeed, we know of none we could more gladly commend to the student of medicine for the pointed and forcible and at the same time interesting presentation of a most difficult and none too agreeable subject. These qualities we have discovered by a very constant employment of the book. The present edition calls for no detailed consideration. It contains those recent additions to therapeutic equipment that have shown themselves worthy of more than temporary notice, and it conforms to the most recent edition of the *British Pharmacopœia*. To the American student this latter fact can be at most but a slight detriment, for many excellent dose books founded upon the *United States Pharmacopœia* are in the market whose use conjointly with the book before us will make an ideal combination.

Treatise on Human Physiology. For the Use of Students and Practitioners of Medicine. By HENRY C. CHAPMAN, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in Jefferson Medical College, Philadelphia, etc. Second edition, Illustrated with Five Hundred and Ninety-five Engravings. Philadelphia: Lea Brothers & Co., 1899. Pp. 9 to 924. [Price, \$4.25.]

THE second edition of Dr. Chapman's work is constructed upon the plan of the first edition, but much revision marks the later issue, as physiological progress has required. In particular, the additions concerning physiological chemistry and the functions of the nervous system are to be noted, but apart from these features the work represents all that is most modern in the knowledge of human physiology and, what is more, the matter is more than commonly well presented.

The Philosophy of Memory and Other Essays. Consisting of Articles on the Philosophy of Emphasis; the Functions of the Fluid Wedge; the Birth of a Planet; the Laws of Riverflow. By D. T. SMITH, M. D., Lecturer on Medical Jurisprudence in the University of Louisville, Louisville; John P. Morton & Co., 1899. Pp. 9 to 263.

THIS title indicates the nature and scope of this little volume. It treats of subjects which have long occupied the writer, and they are of general interest. The essays are pleasingly written and thoughtful, and they contain many original suggestions and speculations.

BOOKS, ETC., RECEIVED.

The Newer Remedies. Including their Synonyms, Sources, Method of Preparation, Tests, Solubilities, Incompatibles, Medicinal Properties, and Doses as far as known, together with Sections on Organic Therapeutic Agents and Different Compounds of Iron. A Reference Manual for Physicians, Pharmacists, and Students. By Virgil Gollentz, A. M., Ph. D., Ph. D., F. C. S., Professor of Chemistry and Physics in the New York College of Pharmacy, etc. Third Edition, revised and very much enlarged. Philadelphia: P. Blakiston's Son & Co., 1899. Pp. vi, 9 to 117. [Price, \$1.]

Twentieth Century Practice. An International En-

cyclopaedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M. D. In Twenty Volumes. Volume XVI.—Infectious Diseases. New York: William Wood & Co., 1899. Pp. v-4 to 785.

International Clinics: A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Judson Daland, M. D. (Univ. of Pa.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc. Volume I. Ninth Series, 1899. Philadelphia: J. B. Lippincott Company, 1899. Pp. ix-303.

The Twelve Tissue Remedies of Schussler, comprising the Theory, Therapeutic Application, Materia Medica, and a Complete Repertory of these Remedies, Homœopathically and Biochemically Considered. By William Boericke, M. D., Professor of Materia Medica and Therapeutics in the Hahnemann Hospital College, San Francisco, etc., and Willis A. Dewey, M. D., Professor of Materia Medica in the University of Michigan Homœopathic Medical College, etc. Fourth Edition, rewritten and enlarged. Philadelphia: Boericke and Tafel, 1899. Pp. 5 to 424. [Price, \$2.50.]

Traité de médecine. Deuxième édition. Publiée sous la direction de MM. Bouehard, Professeur de pathologie générale à la Faculté de médecine de Paris, et Brissaud, Professeur agrégé à la Faculté de médecine de Paris, etc. Tome I. Par MM. L. Guignard, A. Charrin, P. Le Gendre, G.-H. Roger. Avec figures dans le texte. Tome II. Par MM. A. Chantemesse, F. Vidal, L.-H. Thoinot, L. Guinon, E. Boix, A. Ruault, W. Ettinger, L. Tollemer. Avec figures dans le texte. Paris: Masson et Cie., 1898.

Twenty-third Year Book of the New York State Reformatory. For the Fiscal Year ending September 30, 1898.

The Treatment of Post-Operative Conditions. By Emory Lanphear, M. D., of St. Louis. [Reprinted from the *American Journal of Surgery and Gynecology*.]

Shock. By Robert H. M. Dawbarn, M. D. [Reprinted from the *Medical News*.]

Miscellany.

The Punishment of the Insane.—Dr. H. E. Allinson (*American Journal of Insanity*, April) says that closely connected with the question of punishment is that of responsibility. Punishment implies criminality, and these two terms should be divorced from insanity. The old idea of retributive justice appears to have taken firm root in the minds of men, and is hard to eradicate. The whole theory of punishment has undergone, and is still undergoing, radical changes. Even the sane are not subjected to a tithe of the penalties once imposed. The problem is to devise the best means to maintain law and order and protect the interests of society. It is true that the insane are both trouble-

some and dangerous. They have no right to disturb or threaten the peace of others. In hospitals we often remove such unruly elements from quiet wards to noisy and violent ones to insure freedom from annoyance for their associates. If the change results in the greater self-control of the individual, we are gratified. So also, if an insane person is threatening injury to himself, we should take steps to prevent it. Taking away privileges and liberties, however, is not punishment. By analogy, if a sane man fractures his leg, the limb is placed in splints and he is deprived of the pleasure of walking about. If he should become afflicted with a contagious disease, he is quarantined, not as a punishment, but to secure the health and comfort of others. The surgeon determines upon what conditions and when the injured man may walk, and the physician decides when it is safe for the patient to leave the hospital. The dangerous and criminal insane should be judged by a similar standard—namely, the question of their safety to be at large. It is the only criterion that can properly be established. An insane man may have to reap the consequences of his acts, but he should not be punished for them. Insanity, instead of excusing, often lays upon its victims a greater burden and carries with it a longer term of confinement than that imposed by law upon the sane. If the insane were to be held responsible for criminal acts, the majority of them would be imprisoned for brief and definite terms. Those, therefore, charged with dangerous assaults would soon be at liberty again to attempt to injure or to kill. We have a case in mind where an insane man committed a homicide and served a short term. After his release he killed a second victim and was again imprisoned, and upon his liberation again repeated the act; and still again for the fourth time. During his last imprisonment he was found to be insane, and was committed as a lunatic. He has now been detained fifteen years over his time in an asylum to which he should originally have been committed. To hold a woman responsible because she for a time could resist an insane impulse to kill her child but finally yielded, would be similar to reproaching one for succumbing to disease who, for example, should fight the inroads of pneumonia and walk about until no longer able to keep from bed. Society is better protected by the doctrine of irresponsibility. Let the dangerous and criminal insane be sent to a hospital, and the grounds be stated upon which they are declared to be irresponsible, and let them there be held in secure custody so long as such grounds exist. They should be weeded out from the community. Often they are depraved and degenerate. Actual experience has shown that the average length of confinement of persons charged with crime is greater in asylums than in penal institutions. The insane criminal should be placed in an asylum early in his career, not after having run the gantlet of several imprisonments and the commission of numerous crimes. We believe where mental disease exists associated with crime that a careful scrutiny should be made and such persons detained for prolonged observation, treatment, and care; a reasoning which seems eminently sound and is supported by analogy in every other form of disease which finally becomes prostrating to both mind and body.

Temperament as Indicated by the Teeth.—C. H. Nicholson, D. D. S. (*Dental Digest*, May), in a paper recently read before the Rochester Dental Society, said that in this interesting theme of thought much advance

had been made, but the subject did not receive the attention its importance demanded, and was too readily shelved as a hobby, to be ridden only on special occasions. Taking a brief survey, we found that the teeth of the bilious temperament were apt to be strongly colored, being of a bronze-yellow, large and angular, rather longer than wide, neither brilliant nor transparent, with slight translucency, the gums heavy and firm with angular festoon, the articulation closely locked, the corners nearly square, with proximal surfaces in contact a considerable portion of the distance from the cutting edge upward. The arch was nearly flat from one cusp to the other, and the lines from this point backward nearly straight. The dome of the palatine surface was high and nearly square, the rugæ heavy and of square formation, corresponding to the general outline.

In the sanguine we had a creamy-yellow color, beautifully rounded in proportion with well-developed cusps, the surfaces smooth, the edges and cusps translucent, round, and full festooned, set in a horseshoe-shaped arch, the dome high and round, with rugæ numerous and graceful. The jaw being inclined to rotate in mastication, the teeth articulated edge to edge, and were very often worn down to a level surface, the proximal surfaces being in contact for about half their length.

The arch of the nervous was pointed like a Gothic window, the incisors often overlapping, while the vault of the mouth was high and narrow. Articulation was not close. The teeth were pearl blue or gray in color, long and narrow, with fine cutting edges and cusps, brilliant surfaces, edges transparent and set in beautifully festooned gums, corresponding in delicate tracery to this, the artistic temperament.

The lymphatic gave us the large unshapely tooth of greater width than length, with cusps poorly defined and having an opaque, muddy color. The articulation was loose and flat and the gums thick, without beauty of outline. The arch was wide and semicircular in form, and the roof of the mouth low and flat and not particularly marked with rugæ.

The Intracranial Effects of Burns, especially in Relation to Legal Medicine.—At a recent meeting of the French Society of Legal Medicine, Professor Strassmann, of Berlin (*Gazette hebdomadaire de médecine et de chirurgie*, February 23d), communicated a somewhat delicate problem in medical jurisprudence. In a house that had been burned down there was found among the ruins the half-carbonized body of a woman forty-two years of age. The body lay on the left side, which was relatively unaffected, on a bed. The right side was completely consumed, and the bones denuded of soft parts. The right side of the face was equally carbonized, but the cranium was entire. On removal of the cranial vault there was found over the whole surface of the right hemisphere a reddish mass, dry, thick, adherent to the internal surface of the skull, and separated from the dura mater by a layer of thick, dry grumous cerebral matter, which had escaped through a rent in the dura mater of the left hemisphere in the neighborhood of the frontal lobe. The tear was rounded with ragged edges, the size of a mark piece. The reddish-brown mass found in the interior of the cranium bore the appearance of a clot of coagulated blood which had been subjected to a high temperature, and this was confirmed by microscopical examination. Its maximum thickness was about five millimetres, and it adhered firmly to the bone.

The cerebral matter found outside of the dura mater was altered and dried; in some parts it was a centimetre and a half in thickness. The cranial vault was intact. The husband of the victim was suspected of having killed his wife and set fire to the house, and the experts were asked whether the extrameningeal hæmorrhage was to be attributed to external violence inflicted before the fire, or if the latter was adequate to produce it; also information was sought as to the origin of the rent in the dura mater. On the last point the experts were of the unanimous opinion that the expansion of the gases in the interior of the cranium under the influence of heat was quite adequate to account for the condition. The former question was, however, more difficult, and most of the experts held that it had been caused by external violence, which it is known can produce rupture of the dura mater without injury to the skull. Professor Strassmann, however, considered the hæmorrhage also as an effect of combustion. He had, as it happened, recently made an autopsy on three cadavers burned almost to cinders in the explosion of a match factory. In one of them there was found between the cranium and the dura mater a thick brownish layer, resembling in all respects the one described, and consisting also of calcined blood. The fact of an explosion might certainly have suggested an external shock, but careful examination revealed around it the presence of drops of effused fat, whose total volume measured several cubic centimetres. This fat evidently came from the cranial bones, whence it had oozed as the result of heat, from which fact Professor Strassmann suggested that the blood might have had a similar origin from the bones and soft parts. He instituted, therefore, a series of experiments upon human cadavers and on the heads of animals, and found that whenever the head was exposed to a severe heat sanguineous exudation occurred on the inner table of the cranial vault. The following conditions were found to be necessary: 1. A local action of the flames on a limited portion of the cranium. 2. A flame sufficiently intense to carbonize the soft parts and profoundly attack the bone. 3. The cranium intact and not rent by the action of heat.

The United States' Example in the Matter of Hospital Ships Followed.—According to the *British Medical Journal* for April 29th, the example given by the United States during the Spanish-American war of fitting out an ambulance ship under the Red Cross regulations has been followed in Austria. The vessel has been named the *Graf Falkenhayn*, after the first president of the Austrian Red Cross Society. The new steamer, which has an estimated speed of nine knots, has an isolated wing for infectious cases, and two bath rooms, and is provided with all modern hygienic requirements. Its equipment, which is now complete, includes four lifeboats and two disjunctable rafts. The Austrian Red Cross Society is the first institution of the kind in Europe which possesses a permanent naval ambulance.

The New Anatomy. *Practical Medicine* for May has collected the following instances of the newer (literary) anatomy:

The murderers have discovered some astonishingly vulnerable parts of the human anatomy of late. From a paper this morning we learn that a Georgia colonel was "shot in the ticket office"; the other day a man was fatally shot "through his door," and not long ago another received a fatal wound "in his window."—*New York Commercial Advertiser*.

He kissed her passionately upon her reappearance.—*Jefferson Souvenir*.

She whipped him upon his return.—*Hawkeye*.

He kissed her back.—*Constitution*.

She seated herself upon his entering.—*Albia Democrat*.

We thought she sat down upon her being asked.—*Saturday Gossip*.

She fainted upon his departure.—*Lynn Union*.

He kicked the tramp upon his sitting down.—*American Pharmacist*.

We feel compelled to refer again to the poor woman who was shot in the oil regions some time ago.—*The Medical World*.

And why not drop a tear for the man who was fatally stabbed in the rotunda, and for him who was kicked on the highway? For all the above we are indebted to the *Medical Age*, but it fails to mention the fact of the woman being accidentally shot in the waterworks or the man injured upon the long bridge.—*Colorado Medical Journal*.

The New York Medical Gymnastic and Massage Society has been incorporated for the purpose of raising the standard of the practice of medical gymnastics and massage. Dr. H. C. Thompson is the president, and Dr. H. V. Barclay the secretary. There is an advisory board consisting of Dr. Thomas E. Satterthwaite, Dr. Andrew H. Smith, Dr. Leonard Weber, Dr. William T. Bull, Dr. George H. Woolsey, Dr. Henry L. Cochran, Dr. A. J. C. Skene, Dr. Clement Cleveland, Dr. T. Halstead Myers, Dr. Henry Ling Taylor, Dr. William M. Leszynsky, and Dr. Charles L. Dana.

The Jaw and its Uses.—According to the *Dental Digest* for April, in an address, James A. Reed, the prosecuting attorney of Missouri, said: "Now here are two professions living each by the jaw of man, yet distinguished in this: The lawyer uses his own jaw as a weapon of attack and defense; the dentist attacks the jaw of another with a weapon, and there is no defense. The dentist uses the jaw as an end; the lawyer, as a means to an end. Observe, too, the interdependence of these two professions. For if the jaw is the lawyer's weapon, then the dentist who keeps this weapon in good working order becomes a *particeps criminis*, and this is probably the toughest thing ever said of any dentist, living or dead."

The Administration of Chloroform in the Street.—*The Lancet* for May 20th, in a letter from its Berlin correspondent, says:

"A curious event—the administration of chloroform in a public place—happened lately in Berlin. A woman, in trying to jump from an electric tramcar running at full speed through the Friedrich-strasse, fell and her right foot was caught between the platform and a wheel. Police and firemen made long but fruitless attempts to extricate the woman, who screamed piteously. Medical help was then sought at the neighboring university-hospital, from which a surgeon and two assistants were sent. The surgeon decided to administer chloroform in order to facilitate the work of rescue, and did so in the busy thoroughfare and in the presence of a great crowd. The tramcar was raised with lifting jacks, and when, after more than an hour, the woman was released from her terrible position with comparatively slight contusions, the surgeon was loudly applauded by the spectators."

Sacra Fames.—The leech is great on "low diet." Having got a poor mortal in his clutches with typhoid fever, after many weary days of starvation (for the patient) he relented and said: "Well, my friend, would you like a small chicken to-day?" "Indeed I should," replied the invalid. "Well," said the leech, "what shall it be stuffed with?" "Another chicken, please, sir," replied the empty one.—*Echoes from a Mining Camp*.

A New Combined Vaccine Point and Scarificator.—Dr. L. A. Denis, of West Hoboken, New Jersey, has been kind enough to send us a specimen of a vaccine point resembling the ordinary ivory lancet-shaped point, pierced longitudinally by a needle the free point of which, extending somewhat beyond the vaccine blade, serves as a scarificator.

To a Delinquent Patient.—*The North Carolina Medical Journal* for May 20th quotes the following from the *Gross Medical College Bulletin*:

If I should die to-night—

And you should come to my cold corpse and say,
Weeping and heartsick, o'er my lifeless clay;

If I should die to-night—

And you should come in deepest grief and woe,
And say, "Here's that ten dollars that I owe,"
I might arise in my great white cravat
And say, "What's that?"

If I should die to-night—

And you should come beside my corpse to kneel,
Clasping my bier to show the grief you feel;

I say if I should die to-night—

And you should come to me, and there and then
Just even *hint* 'bout paying me that ten,
I might arise awhile—but I'd drop dead again.

The "Ophthalmotrician."—The following resolutions, presented by Dr. Louis J. Lautenbach, of Philadelphia, and supported and seconded by Dr. S. S. Towler, of Marionville, were unanimously adopted by the Medical Society of the State of Pennsylvania, on Wednesday, May 17th:

Resolved, That it is the opinion of the Medical Society of the State of Pennsylvania that opticians are not qualified by their training nor are they legally qualified to perform the work of the oculist, and they should not be the consultants of regular physicians. Further, it is

Resolved, That all physicians are requested to call their brother physicians in consultation, thus discountenancing the growing pretenses and assurances of the optician and his brother, the graduate optician, or, as he is beginning now to call himself, the "ophthalmotrician."

It is Dr. Lautenbach's praiseworthy purpose to present similar resolutions, substituting American Medical Association for Medical Society of the State of Pennsylvania, for adoption by the American Medical Association at Columbus, on Tuesday morning, June 6th.

Liquefied Air and Hot Rooms.—According to the *North Carolina Medical Journal* for May 20th, liquefied air has been suggested as a possible means of cooling the sick room in hot weather.

The Death of Dr. Georges Assaky, of Bucharest, is announced as having taken place on April 22d. He was forty-four years old.

Original Communications.

SOME REMARKS UPON
OBSTETRICS IN PRIVATE PRACTICE.*

By J. CLIFTON EDGAR, M.D.

IN an age of brilliant surgical operations, of bacteriology and serum therapy, we are prone to lose our interest in those procedures which form part of the routine work of the general practitioner. My excuse for bringing such a time-honored subject as the above before this society is the firm belief that the last word has not yet been spoken about so prosaic a topic as the management of normal labor.

I believe I am correct in stating that the general practitioner and obstetrician are too apt to consider only mortality in their results, and to pass over entirely the question of morbidity. Even to-day in midwifery the influence upon morbidity, the ultimate consequences of a mild puerperal septic process, are too apt to pass unrecognized by the obstetrician, until his case passes into the hands of the gynecologist for the cure of chronic uterine and circumuterine inflammation, which had its origin in some lapse from true aseptic principles during the management of what we are pleased to term normal labor.

We hear daily of a reduced mortality and little or nothing of a lowered morbidity rate. It is with the object of referring to some of the lapses from aseptic principles and the means to avoid them in the management of normal labor that this paper is presented this evening.

We start out with the premise that the whole process of labor, properly considered, is a conservative process whose tendency is to prevent sepsis, and it should be our aim not to thwart this process or supplant it by methods of art, but to follow and aid it, only interfering when for one reason or another the resources of Nature prove insufficient.

Recently the writer received the following letter of inquiry, which bears directly upon the subject:

WILMINGTON, D. C., December 1, 1898.

"MY DEAR DOCTOR: Will you kindly advise me regarding the following points:

"1. Do you refer your patients to some dealer from whom they can procure an obstetric outfit, or do you instruct each patient how to prepare and sterilize vulvar napkins, abdominal binders, surgical dressings, etc.?"

"2. What obstetrical bag do you advise; has it a sterilizer and lamp combined, where can such a bag be obtained, the price, etc.?"

"3. What is the best way to keep records of obstetrical cases?"

"Thanking you in advance, believe me

"Very truly yours,"

In order to bring out the suggestions I desire to emphasize, I do not think we can do better than take the above letter as our text.

1. *The Obstetric Outfit.*—Shall the obstetric outfit be prepared by the patient or nurse, or shall it be procured already prepared from some dealer in surgical dressings?

A further question naturally suggests itself—namely, of what does the obstetric outfit to-day consist?

Aside from the "mother's outfit," meaning the clothes she will need during her lying-in period, and the "baby's outfit," including, if possible, a "baby basket," the obstetric outfit should at least include the following articles:

1. A douche pan, preferably square and of enamel or agate ware.

2. Two ordinary rubber blankets, or two pieces of rubber sheeting, one one yard square and the other two yards square.

3. Three or four dozen soft napkins for vulvar dressings, or the same number of vulvar pads from a surgical-dressing dealer.

4. One or two pounds of sterilized absorbent cotton, or twenty-five yards of cheese cloth or sterilized gauze. This for sponging.

5. Six abdominal binders of soft muslin or mull, eighteen inches wide and preferably made to fit the figure at the sixth month of gestation.

6. Two hand brushes.

7. Some old linen for the baby's eyes and mouth.

8. Four ounces of tincture of green soap.

9. Bottle of sublimate tablets.

10. Seven ounces of chloroform.

11. Four ounces borie acid, powdered.

12. One tube of sterile white vasoline (for the baby).

13. Small and large safety pins and bank pins.

If there is no nurse available before labor sets in, and it is necessary for the patient to see to the cleansing of the above articles, she may be instructed to pin the douche pan, rubber sheeting, and hand brushes separately in coarse kitchen towels and boil for half an hour in an ordinary wash boiler. The articles so boiled are then dried without removing the towels, put away, and not opened until the time of labor.

The soft napkins, if these are to be used for vulvar dressings, should, freshly laundered, be pinned, half a dozen in a package, in coarse kitchen towels and put away until the onset of labor. The nurse is then instructed to sterilize one package at a time by sponging in the oven until the outer cover is thoroughly dry. For sterilizing instrument, and disinfecting the skin of the kitchen range, one only need place them in water graduated to 200° C., so as to prevent the water from rising too high, and to make sure that 200° C. is obtained. The absorbent cotton, the old linen for the baby's eyes, and

* Read before the Society of Alumni of Bellevue Hospital, 1898.

the cheese cloth are treated in the same way, the two latter being cut up into convenient pieces and sterilized as needed. It is sufficient that the abdominal binders be thoroughly laundered and pinned separately in freshly laundered towels until needed.

Further articles to be in readiness at the time of labor, and obtainable in most households, should include:

Articles to be in Readiness at Time of Labor.—1. Arrangements for an abundant supply of hot water.

2. A bowl for vomited matter.

3. Two clean earthen, agate, enamel, or paper ware bowls for hand cleansing.

4. A clean bowl for the placenta.

5. Three pitchers: one for boiling water, one for cold boiled water, and one for mixing antiseptic solutions.

6. A clean cup or tumbler with boric-acid solution and gauze or old linen wipes for the baby's eyes.

7. A half dozen freshly laundered old linen sheets to serve as bed pads or pilches.

8. An abundant supply of freshly laundered sheets and towels.

9. A change of night clothing, warmed, for the mother.

10. A warm blanket to receive the baby.

Of these articles, the four bowls, the cup, and the three pitchers should be scrubbed with soap and water and boiled in a wash boiler, or at least scalded out.

It is sufficient that the old sheets to be used as bed pads and the usual bed sheets and towels are freshly laundered.

For special cases, however—for example, breech presentations—it is desirable that half a dozen towels are sterilized by boiling or by dry heat in the oven, as described above.

It will be noticed that the time-honored douche bag and tube have not been referred to, and this is because we do not employ douches except for a positive indication; and, further, because we believe these articles should be part of the physician's obstetric outfit, sterilized and cared for under his direct supervision. I know of no reason why a patient, be she ever so wealthy, should purchase an instrument which *may* be needed, and, like other surgical appliances, should only be used by the physician himself, or under his direct supervision. For it is my firm conviction that, both from the clinical and bacteriological standpoint, an intra- or post partum douche, be it never so carefully administered, carries with it a distinct risk of infection, and in case a responsibility which should not be lightly assumed.

Most or all of the articles contained in the above list of the "obstetric outfit" can to-day be obtained, sterilized in their final wrappers and ready for use, from many of the dealers in surgical dressings, notably Van Horn & Co., New York; Kalish, New York; Johnson

& Johnson, New York; and Fraser & Co., New York, at prices for the outfit varying from four to thirty dollars.

These obstetric outfits, cleansed and sterilized, are usually packed and sealed in a neat box, thus allowing the contents to be kept intact until needed.

The contents of these outfits vary somewhat in detail, but the following list contains the essentials:

Obstetric Outfit.—1. Agate-ware (square) douche pan.

2. Sterilized bed pads.

3. Sterilized vulvar pads.

4. Sterilized absorbent cotton.

5. Sterilized absorbent gauze.

6. Two pieces of rubber sheeting or two ordinary rubber blankets, one for permanent labor bed and the second for the draw sheet.

7. Abdominal binders.

8. Glass and rubber catheter.

9. Scrub or hand brush.

10. Sterilized tape for cord.

11. Sublimite tablets; boric acid powdered; chloroform; ergot; borated talcum powder; soap; tube of sterile vaseline; safety pins.

II. An Aseptic Obstetric Case and Sterilizer Combined.—For over a year I have been experimenting with different patterns of bags and cases in order to fulfill the requirements of private practice. I have always looked upon leather obstetric bags with suspicion and fear, because of the difficulty of cleansing them, and because articles to be used in the lying-in room can not be safely carried in them unless such articles and instruments are boiled immediately before use. Further, we believe that the ordinary leather obstetric bag which has been from one case to another, in cabs and street cars, which of necessity has had its interior soiled by bloody fingers and instruments, green soap, ergot, or other drugs, has no place in the lying-in room in the present age of aseptic surgery. Leather obstetric bags, therefore, can not be recommended, because of the difficulty, if not impossibility, of cleansing them. I have recently (December 20, 1898) had cultures taken from the interior, especially the corners and angles, of six obstetric leather bags, in the bacteriological laboratory of the Cornell University Medical College, and, although the results as reported from these cultures proved negative, such evidence, of course, is insufficient.

Linen obstetric bags which can be boiled or sterilized by steam have been used in Germany.

Dührssen has used an asbestos bag, which can be sterilized by dry heat with the instruments *in situ*.

Aluminum I have experimented with, but find unsuitable by reason of the uncertain composition of the metal.

The ideal obstetric case is one made entirely of metal, which will permit of cleansing by dry heat, steam, or boiling. Such a case may be contained for transport-

tation in a suitable holder or bag. The bag-shaped cover is preferable because more convenient and conventional.

The great disadvantage of a metal case, in addition to its greater cost, is its additional weight.

The aseptic metal obstetric case, which I here recommend, is the result of much experimenting, and weighs but six pounds more, including leather holder or case, than an ordinary leather obstetric bag. The weight of the case complete, with glassware filled and including a Tarnier forceps, is twenty-five pounds.

This increased weight can be further reduced some two pounds by the use of lighter metal in the manufacture of the case.

From actual experience over a period of several months we believe that the inconvenience of the additional five or six pounds is more than overbalanced by the many advantages of such a case, not the least of which is cleanliness.

The case practically consists of two trays, male and female, made of sheet iron and enameled in white at a temperature of several hundred degrees (Fig. 1). The male or larger tray measures $17 \times 8 \times 6$ inches, partially fits into the shallower female tray ($17 \times 8 \times 3\frac{1}{2}$ inches), leaving a space of two inches, in which space is contained a third tray made of canvas, with loops and compartments to contain the glassware of the case

simply dropped over the trays, and straps prevent the latter from falling out (Fig. 1). A more elaborate holder is one made on the ordinary bag plan, but without bottom other than one-inch side flaps; this also

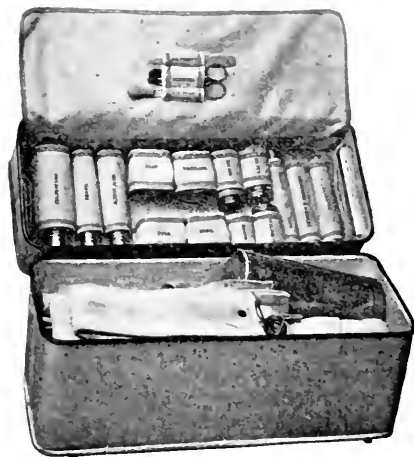


FIG. 2.—Smaller female tray above, containing canvas tray, with cover of latter thrown back to expose its contents; larger male tray below, with some of its contents showing. (From photograph.)



FIG. 1.—Leather holder of case above; below, male and female trays, with some of the contents of the former. (From photograph.)

(Fig. 2). A leather holder or case covers both trays when fitted together, and strong straps hold it firmly together. Two leather holders are made. The simplest and cheapest is one with opening below, which is

drops over the trays and is strapped in place. The top of this holder opens as an ordinary bag, thus obliterating all but lateral corners, and allowing of thorough cleansing.

My objects in having the case thus made of two trays, one large and the other small, and both enameled at a high temperature, with an inner canvas tray to contain the glassware, are as follows:

1. The case is aseptic. The case proper can always be rendered sterile before being taken to a confinement case by either boiling, baking in an ordinary kitchen oven, or by steam under pressure, as the size of the case permits its being sterilized in the medium-sized steam sterilizer of the market. No matter what the character of the case attended, be it ever so septic, or instruments, douche bag, catheter, gown, etc., ever so soiled with pus and blood when thrown into the case to be carried home, the entire outfit can be placed in a wash boiler and rendered sterile in a short period of time by boiling.

2. Such a case furnishes a neat table, after the canvas tray is removed from the smaller tray and the contents from the larger, with two handy receptacles which may be put to a most convenient use and will often prove most valuable and convenient. For example, aside from a supply of water, a small tin of carbolic acid, and more need be supplied, the case, in case of confinement than the case and trays, and the larger tray, which holds, when half full of water, may be used to wash the hands and face, and to pour water and

the smaller female tray, which holds when half full three quarts, to disinfect the hand and forearm in sublimate solution.

3. The length of this tray (seventeen inches) permits of the entire forearm being submerged in the sublimate solution, an advantage that will quickly be appreciated by the surgeon (Fig. 3).

4. The writer is in the habit of using the smaller female tray as a sterilizer. The obstetric forceps I boil just before using it. It is after use scrubbed with soap and hot water and a hand brush by my office nurse, then boiled in an ordinary fish kettle, wiped dry, pinned in a freshly laundered towel, and placed with the other articles in the case ready for the call.

When in the course of labor indications point to the use of forceps, the instrument, still pinned in the towel, is placed in the smaller tray of the case, and sent to the kitchen to be boiled for an hour. The boiling water is poured off in the kitchen, and the forceps, still in its towel, is brought in the tray to the bedside, and the towel is only removed after the patient and the operator's hands have been prepared for operation.

5. The larger tray, again, by reason of its size, makes an excellent bath in which to plunge an asphyxiated child, and one has always at hand a convenient bath tub in which a modified Byrd's method of artificial respiration can be carried on, the child being meanwhile submerged in very hot water (Fig. 4).

6. The advantages of the inner canvas tray, which rests in the space between the two metal trays, will be readily appreciated (Fig. 2). This tray is practically a canvas case, measuring $17 \times 8 \times 2$ inches, with a lid, and canvas handles at either end to lift it out of the smaller metal tray (Fig. 2). My object in using canvas here, with a separate loop or compartment for each piece of glassware or instrument, was to secure a noiseless tray for this part of the physician's obstetric outfit, one in which the articles are all in plain sight, so as to be selected at an instant's notice, and one, moreover,

over it in bold type and indelible ink the name of its contents, so that any desired article can be selected at a glance and the absence of any article readily detected. Until one has actually used such an arrangement of the

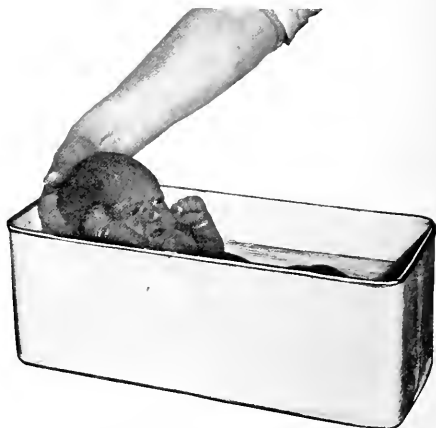


FIG. 4.—Large male tray used as a bath for an asphyxiated infant. (From photograph at Emergency Hospital.)

physician's obstetric outfit at the bedside no description can possibly convey the convenience and satisfaction of having everything necessary for an emergency or ordinary labor thus spread out before one, all labeled and contained in an aseptic case.

7. The case as a whole is readily converted into an ideal obstetric operating case by the addition of the desired instruments pinned in towels and placed in the larger of the two trays, for which purpose sufficient room has been provided. The length of the large tray permits of Tarnier's forceps, a cranioclast, and cephalotribe being carried in it.

Contents of the Case.—a. In large male tray:

1. Clean apron.
2. Kelly pad.
3. Canvas lithotomy sling.
4. Four-quart sterile douche bag (pinned in towel).
5. Metal receptacle containing sterile vaginal and douche tubes and glass catheter.
6. Volsella, dressing, needle, and tongue forceps and scissors (pinned in towel).
7. Obstetric forceps (pinned in towel).
8. Sterile cotton and plain gauze.
9. Five-per-cent. iodoform gauze.
10. Two sterile nailbrushes.

The two metal and the one canvas tray having been cleansed by boiling or dry or moist heat, as already described, each of the various articles contained in the above list is cleansed in a different manner in order to secure surgical cleanliness.

1. The apron is simply freshly laundered.
2. The Kelly pad is usually cleansed by my office

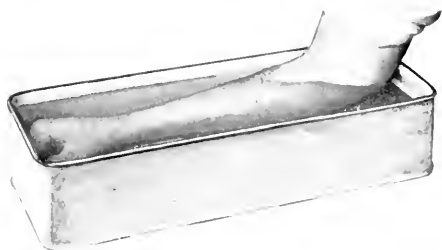


FIG. 3.—Small female tray used to submerge hand and forearm in sublimate solution. (From photograph.)

that can be repeatedly, cleansed by boiling whenever soiled by bloody fingers, soap, vaseline, or ergot. The principle of "a place for everything, and everything in its place," is here adhered to. Each loop has stamped

nurse with laundry soap, hot water and brush, and finally with a 1-to-20 carbolic-acid solution; should the pad be used about a case where a suspicion of sepsis exists, it is boiled for half an hour.

3. The Kelly canvas lithotomy sling is made of canvas, galvanized iron rings, and brass buckles, and is always boiled for half an hour after use.

4. The four-quart douche bag and tubing are, after use, scrubbed with hot water, soap, and a brush, rinsed in clean hot water, pinned in a clean towel, and boiled for half an hour. The towel and bag are then allowed to dry in an enamel-ware vessel over the kitchen range, and when dry are placed in the case.

5. The metal receptacle containing the glass douche tubes and catheter is boiled together with the lithotomy sling and douche bag. Both metal receptacle and glass tubes are first, however, scrubbed in a hot soda solution with soap and a brush.

6. The volsella, dressing, needle, and tongue forceps and scissors are, before being pinned in the towel, simply scrubbed in hot soda solution with soap and brush, and then dried, as they are intended to be sterilized by boiling at the residence of the patient.

7. The obstetric forceps is treated in the same manner as the foregoing.

8. The sterile cotton, plain gauze, and iodoform gauze I am accustomed to procure already sterilized from a dealer in surgical dressings.

b. In canvas tray contained in small female tray:

1. Green soap (sterile).

2. Vaseline (sterile).

3. Gauze eye sponges (sterile).

4. Gauze cord dressing (sterile).

5. Chloroform.

6. Ergot.

7. Strong acetic acid (99.5 per cent.).

8. Sublimate tablets.

9. Fine boric acid (sterile).

10. Normal saline powders.

11. Silver-nitrate solution (one per cent.).

12. Tape for cord (sterile).

13. Silk and gut ligatures and needles (sterile).

14. Soft-rubber catheter (sterile).

15. Umbilical scissors.

16. Medicine dropper.

17. Nail cleaner.

18. Safety razor.

19. English catheter (No. 16) with stylet.

20. Safety pins.

21. Sterile gauze bandage for sling.

22. No. 8 soft braded catheter opening at end.

23. Spring scales.

1, 2, 3, 4. The green soap, vaseline, gauze for eye sponges, and cord dressing are contained in one ounce screw-top ointment pots, and are sterilized by placing on the tray of a steam sterilizer.

5, 6, 7. Excepting the small two drachm bottle of

silver nitrate, there are but three bottles in the entire case.

These bottles are for chloroform, ergot, and acetic acid, and contain four ounces of the first and one ounce each of the last two. The bottles are glass-stopper and metal-cap safety bottles, and are especially made as reliable containers of chloroform, ergot, tincture of iodine, or carbolic acid for medicine cases and bags, as they are equally tight and free from leakage when resting longitudinally. The bottle is of heavy flint glass, with emery-ground glass stopper fitted accurately in the neck, and the stopper is kept in place by the metal cap, which firmly screws over the stopper and around the neck of the bottle, thus preventing any possible chance of the stopper becoming loose, and reducing the liability of leakage, if any, to a minimum. Experience has taught me that in addition to the cork supplied as a cushion in the top of each metal cap, a small quantity of absorbent cotton holds the glass stopper more securely. The advantages of such bottles in an obstetric case are sure to be appreciated after actual experience with them. We carry in the case Squibb's chloroform and Squibb's fluid extract of ergot, the latter for administration both by the mouth and with the needle. We use also Squibb's acetic acid, carrying the stronger preparation (99.5 per cent.). One ounce of this strong acid is sufficient to make several quarts of a 1-to-100 solution of acetic acid, which is the strength we make use of for vaginal and intra-uterine irrigation.

8. The sublimate tablets are contained in one-ounce glycerin-jelly jars with screw tops, each jar being capable of containing about thirty tablets of the size to make in a pint of water a 1-to-1,000 solution. The jars are "wide-mouthed," easily cleansed, strong, and of convenient size.

9 and 12. The boric acid, powdered, for dressing the stump of the umbilical cord or the baby's eyes, and the tape for the cord are contained in half-ounce screw-cap glass tubes, and both are sterilized by placing on the tray of a steam sterilizer.

10. The powders, three in number, for making a normal saline solution are contained in one-ounce glycerin-jelly jars. Each powder is sufficient to make one quart of the solution and has the following formula:

R Sodium carbonate gr. xv;

Sodium chloride 5 jss.

The powders are wrapped in paraffin paper, and, as the jar is practically air-tight, the powders are always ready for use.

11. The silver nitrate solution (one per cent.) for the baby's eyes, in a two drachm phial, is packed in absorbent cotton in one of the one-ounce glycerin jars. Even should the inner bottle leak or break, we still have the cotton and the outer jar to prevent leakage.

13. Silk and gut suture, cervix and perineal needles, are carried ready sterilized in a two-ounce and a-half screw-cap tube.

14. A No. 10 soft catheter is carried sterilized ready for use in another tube.

15, 16, 17. The umbilical scissors, medicine dropper, and nail cleaner are carried in loops in the lid of the canvas case. The medicine dropper is boiled and the scissors are sterilized in an alcohol flame at the bedside. After use, they are scrubbed in hot soda solution, with soap and brush, dried, and returned to the case.

18. A safety razor for shaving the vulva before forceps operation or version is also to be found in the canvas tray. In its tin case it takes up almost the same amount of space as a one-ounce glycerin jelly jar.

19, 20, 21, 22, 23. In the space in the middle of the tray is found room for a No. 16 English catheter, with stylet, for use to carry slings, or replace the cord or arm; safety pins; a sterile gauze bandage to use for slings in version; a No. 8 Lisle-thread braided catheter, with opening on the end, to clean out the baby's throat, and for a spring scale to weigh the baby.

Obstetric Operating Case.—For an operating set add to labor case the following:

1. Braun's cranioclast.
2. Dubois's scissors.
3. Smellie's perforator.
4. Three artery clamps.
5. Perineal retractor.
6. Tarnier forceps.
7. The above six pinned in towels and sterilized.
8. Scalpel and blunt bistoury.
9. Ether.
10. Rubber apron.
11. Sterile gauze bandages for slings.

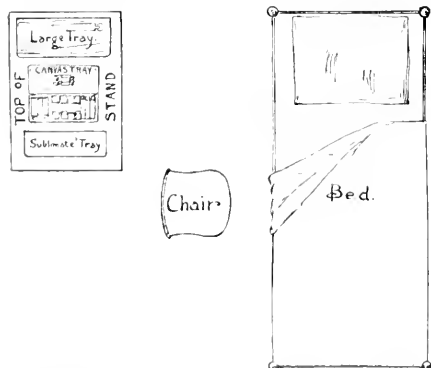


FIG. 5.—Plan to illustrate use of the obstetric case at the bedside.

Use of the Case at the Bedside. It is recommended in the use of this obstetric case at the bedside that the leather cover be removed in another room or the hall, and only the enamel ware tray, carried into the lying-in room. A small table is selected, placed at the head of the bed, on the side selected for vaginal examinations and delivery. The table is covered with two or three

freshly laundered towels. The large male case is lifted out of the smaller female tray and placed, with its contents undisturbed, at the distal end of the table (Fig. 5). The canvas tray is then lifted out of the small female tray and placed with its lid thrown back next to the large tray, and, lastly, and nearest the physician, is placed the small female tray ready for the sublime

No.	Date	PREGNANCY	Diagnosis
Mrs.	(Address)	(Phone)	Date of expected labor
Age	Prior	Married	(Address)
Education	[]	[]	(Phone)
Family history	[]		
Personal history	[]		
Previous pregnancies	[]		
Previous labors	[]		
Previous operations	[]		
Examination of pregnancy (Date)	[]		
Abdominal	[]		
Vaginal	[]		

FIG. 6.—Pregnancy index card; this side of card is for a history of the case and the examination of pregnancy; this card also acts with others arranged consecutively as an index of the dates of expected confinements.

solution. If it is desirable to use the larger tray for hand washing, the articles contained in it may be arranged conveniently upon another portion of the table. Ordinarily, we do not disturb the contents of the larger tray until needed, and use running tap water for hand cleansing with soap and water (Fig. 5).

The nail cleaner, green soap, and one of the hand brushes are now taken to the nearest tap of hot and cold water or to a basin of hot water, the coat removed and sleeves rolled to the elbow, nails cleaned, and hands and forearms scrubbed and rinsed free of soap. Returning to the bedside, the clean gown is put on, the remaining hand brush dropped into a solution of 1-to-2,000 sublimate in the smaller tray, and the hands and forearms scrubbed in this. The patient having been prepared for vaginal examination and confinement, these are carried out forthwith. As labor goes on, the various articles are taken from the canvas and large tray as needed. Sterile cotton and plain gauze are at hand as needed for sponges in any of the three stages; the Kelly pad for the rupture of the membranes or the second and third stages, or vaginal douches; the sterile douche bag and glass tubes for irrigation; the sterile vaseline for lubricating the fingers, if one desires to use it; chloroform for administration in second stage; sterile gauze sponges to wipe the baby's eyes and mouth out on the expulsion of the head; sterile tape to tie the cord; sterile dressing for the same; clean scissors to cut the same; nitrate of silver for the eyes; ergot for the end of the third stage, or hemorrhage, as well as acetic acid for the latter,

and a soft catheter to aspirate the baby's larynx. Should complications occur, we have a sterile lithotomy sling and the Kelly pad for drainage at the side of the bed; a safety razor to shave the vulva; a catheter to empty the bladder; a volsella and dressing forceps and iodoform

either the larger or smaller tray and sent to the kitchen to be baked or boiled.

The case is made by Messrs. Charles Reynders and Sons, Twenty-third Street and Fourth Avenue, New York.

III. *Keeping Records of Obstetric Cases.*—We have nothing new to offer in the method of recording and preserving histories of obstetric cases in private practice, other than a compact, inexpensive card-index system. We have at various times in the past used the ordinary history sheets and history books for this purpose, but experience has proved the card system to be most satisfactory, because simple, orderly, and self-indexing. The cards we use are, as recommended by Dr. Robert L. Dickenson, of Brooklyn, of standard size ($6 - 6\frac{1}{8}$ inches), and are obtainable of the two largest card-index makers

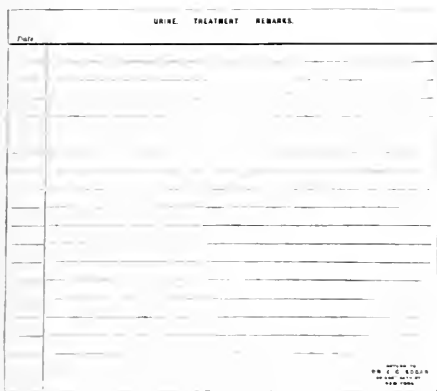


FIG. 7.—Reverse of pregnancy card; upon this side of the card are recorded the results of the various urinary examinations of pregnancy, as well as treatment or remarks.

gauze to pack the uterus; needle forceps, needles, scissors, silkworm and catgut for lacerations of cervix or perineum; an English catheter to replace a prolapsed cord; a tube to give intra-uterine irrigations and sterile bandages to use as slings for versions.

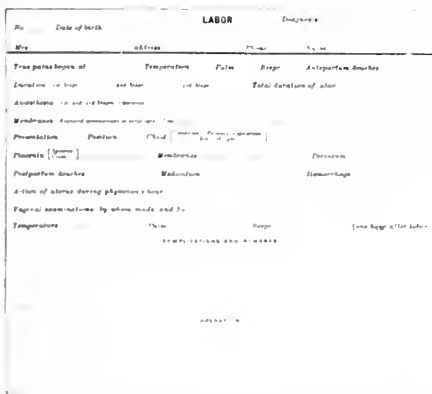


Fig. 8. Labor and performance card upon this side of the card is recorded the history of labor should no room be required for history of complaints or operations; a diagnosis block card of 12 by 10 is used in addition.

If major obstetric operations are demanded, we add to the above case the list of instruments already enumerated.

If at any time in the course of labor the forceps, perineorrhaphy, or uterine packing set appear indicated, they are, in their original wrappings, placed in



FIG. 9. Reverse of Fig. 8—record of puerperium and examination of the patient at the end of puerperium and attendance.

of this city—namely, the Library Bureau, 280 Broadway, and Globe Company, Fulton and Pearl Streets. Such cards are elastic and portable and can be readily used at the bedside or operating room, for, when doubled, the history of the patient can be readily carried in the pocket or card case.

For indexing and preserving the cards, an oak tray with cover, the latter one third the height of the box, and the whole to contain a thousand cards, is convenient. Any of the different methods of indexing the cards may be used. For obstetric use, we utilize three printed cards: The first, pregnancy (Figs. 6 and 7), the second, labor (Fig. 8) and puerperium (Fig. 9), and the third, a diagnosis card (Fig. 10), which is printed on a blank and is used for complications and, with the first two cards, prove sufficient to cover the whole history.

The observations to be noted are: (1) the number of firms (6 and 7), labor (Fig. 8), and capital (Fig. 9) have been carefully selected, (2) the owners of most of many years' experience in the textile industry, (3) a good industry record, (4) of course, the data is selected to ob-

stetrics, for the same case with the blank "diagnosis" cards (Fig. 10) may be applied to general medicine and surgery.

I am in the habit of urging upon my students the importance of starting some such method of history-taking in order that they may subsequently profit from a study of their cases. Should the physician not take up some methodical system of recording his cases at the outset of his practice, he is not likely to do so later. Of course, it is not always pleasant to acknowledge one's errors upon paper, but one can learn as much or more from a subsequent study of such errors as from successes.

Method of using the History Cards.—As already stated, there are only three printed cards in the case, as labor and the puerperium are contained upon one card. For convenience in indexing and selecting, we use three colors—blue for pregnancy, salmon for labor and

buff diagnosis card, and given a number referring to the detailed account of the case, written on the usual bedside history charts, which latter history sheets are filed in large letter-file boxes. The buff abstract card is then indexed alphabetically with the other cards.

At the completion of the puerperium, the labor and puerperium card is returned to the box. At the end of the year, or other convenient time, all cards belonging to a given case are fastened together with a brass clip and indexed among the alphabetical guides at the distal end of the box. We use the "Niagara clip," which securely holds the thinnest piece of paper and does away with pins and other puncture fasteners. For obstetric cases seen in hospital or consultation work, we carry to the case the three cards, folded, in the pocket, and make the observations in the operating room or at the bedside.

50 EAST THIRTY-FOURTH STREET.

QUANTITATIVE DETERMINATION OF ALBUMIN IN THE URINE.

By CHARLES W. PURDY, M. D., LL. D.,

CHICAGO.

ALTHOUGH fairly accurate and ready methods of detecting the presence of albumin in the urine have been known and practised for over a century, yet it can not be said that any of our present methods for quantitative estimation of albumin in the urine are in any degree satisfactory for practical clinical work. The gravimetric method requires so much time and labor to reach trustworthy results that it is altogether out of the question for daily work. The volumetric method of Esbach requires twenty-four hours' time to reach results, which in the end can not be said to be uniform or satisfactory. The coarser volumetric methods, as coagulation by heat or other agents and standing aside in graduated tubes for measurement, give no uniform or exact results that can be taken as a safe guide in clinical work. In addition to this, the present lack of a uniform method of expressing quantities of albumin in the urine by the different methods has rendered the whole subject confusing and misleading not only to the student but often to the clinician. Thus we hear and read of the expression "percentage of albumin in the urine" as applied indifferently to gravimetric and volumetric measurements, as though they were synonymous in significance, when, as a matter of fact, the differences between the two are so widely apart as to be absolutely misleading unless the proper distinction is made. Thus it is no uncommon thing to note in the urine the presence of twenty or thirty per cent. of albumin expressed volumetrically. Such a percentage by actual weight would be a physical impossibility, because the amount of albumin in the blood serum itself never exceeds nine per cent.; and it would therefore be clearly impossible for the proteid contents of any fluid derived

FIG. 10.—Blank card ruled; used as extra card in pregnancy, labor, or puerperium, or as index card for general non-obstetric subjects.

puerperium, and buff for the diagnosis or blank card. The pregnancy cards I keep in the proximal end of the case, by themselves, until finally indexed, and they constitute during this time an index of cases of expected confinement. Upon seeing a case of pregnancy in the office or at the patient's home, the pregnancy card is made out and returned to its place in the box, and becomes a record of a case of an expected confinement. Upon the receipt of the first specimen of urine, the analysis, with date, is recorded upon the back of the card, as well as any subsequent treatment or remarks upon the case. Upon being called to a case of labor, one selects the proper pregnancy card and a blank labor card to take with him to the case. During or after labor, the labor card is filled in and left at the case for the nurse to record the observations of the puerperium of both mother and child, the pregnancy card being returned to its place in the case.

Should the labor or puerperium prove complicated, requiring more space, the history is abstracted on the

directly from the blood to exceed the albumin in the blood serum itself. As a matter of fact, the amount of albumin in the urine, expressed gravimetrically, rarely rises above two and a half per cent., and perhaps never exceeds three per cent. It is therefore obvious that at present we lack a ready, trustworthy, and convenient method for the determination of albumin in the urine, coupled with more exact and definite methods of expressing results obtained. A method embracing these essential features as its basis should lend valuable aid in clinical observation, and tend to greater precision in the therapeutics of albuminuria, both of which are greatly needed.

With these objects in view, about five years since I began experimental investigations of the subject, and within the last year I have been enabled to bring my investigations to a satisfactory conclusion. In brief, the method finally adopted and now brought forward consists in precipitation of the albumin by a uniform method, uniform measurement of the same volumetrically by means of the centrifuge, the determination of the actual relationship between volumetric and gravimetric percentage, and finally the establishment of a table for practical work that expresses these relations in detail. In order to harmonize the different methods of expressing quantities now in vogue, the table is made to show the volumetric percentage, its corresponding gravimetric value of dry albumin, and the corresponding number of grains of albumin to the fluid ounce.

A number of methods of determining the quantity of albumin in the urine volumetrically have been devised upon the principle of precipitation by reagents and allowing a definite time for packing by gravitation, and some of these have been much in vogue in clinical work. It requires but little exact observation, however, to show that results thus obtained are very far from being uniform or accurate when compared with those obtained gravimetrically, and therefore they are misleading. The force of gravitation, which is depended upon for uniform packing, is inadequate to overcome the lesser forces which arise from varying conditions in the test and its physical surroundings. Thus the slow chemical changes progressing between the reagents, or between these and the urine, or even in the latter itself, are often sufficient to liberate enough gases to completely counterbalance the force of gravitation, and the albumin rises as a consequence *en masse* to the surface. Thus, indeed, often occurs with Esbach's test, heretofore so much employed. In a less degree the quantity of albumin present, the specific gravity of the urine, and the surrounding temperature furnish disturbing influences by opposing forces to that of gravitation, and thus prevent uniformity of results. In short, gravitation is altogether too feeble a force to secure uniform volumetric measurements of bodies whose atomic weights are as light as those of the proteid group. Fortunately, the

introduction of the centrifuge has rendered it not only possible but practicable to largely neutralize the opposing forces to volumetric measurement of many constituents of the urine—albumin included—and this is accomplished by the substitution of a force many hundreds of times greater—viz., centrifugal force. In addition to this, by the same means we are enabled to shorten the time of analysis from twenty-four hours to fifteen minutes, thus bringing the process easily within the requirements for practical clinical work.

The method worked out in my laboratory and herewith brought forward for practical use consists concisely and briefly as follows: Precipitation of the albumin in carefully graduated percentage tubes (fifteen cubic centimetres capacity) by means of two cubic centimetres of fifty per cent. acetic acid, and three cubic centimetres of a ten-per-cent. solution of ferrocyanide of potassium added to ten cubic centimetres of the urine. After mingling the reagents with the urine, the whole should stand for ten minutes to insure entire precipitation of the albumin. The tubes should next be placed in a centrifuge, the radius of which should be exactly six inches and three fourths, and the centrifuge should be operated at fifteen hundred revolutions per minute for exactly three minutes. If the conditions above stated are carefully followed, the volumetric percentage may be read off from the scale on the percentage tubes, and with it the corresponding gravimetric percentage and the corresponding number of grains of albumin to the fluid ounce will be indicated by referring to the table on the following page.

As already stated, the time required to carry out this test need not exceed fifteen minutes; and it has been ascertained from numerous observations in which the dried albumin was carefully weighed and compared with the table that the range of error by this method need not exceed one hundredth of one per cent. (0.01 per cent.) expressed gravimetrically. While such minimal errors are of no practical import, being in fact no greater than ordinarily claimed for the gravimetric method itself,⁶ nevertheless for the benefit of those who desire, so far as possible, absolute results, the chief sources of error and the best means of their avoidance will now be considered.

1. With regard to the urine, this should first be filtered and its chemical reaction ascertained, and if found to be neutral or alkaline it should be rendered frankly acid by the careful addition of a few drops of acetic acid, great excess being avoided. Next, if the quantity of albumin is excessive, as may be determined by a rough preliminary test, the urine should be diluted with one or more volumes of water until the volumetric percentage does not exceed ten or at most fifteen per cent. After a little practice quantities of albumin under fifteen per cent. will be obvious upon precipitation, so

⁶ See Hammarsten, first edition, p. 599.

Table showing the Relation between Volumetric and Gravimetric Measurement of Albumin.
Purdy's Volumetric Method.

Percentage by centrifuge.	Percentage by weight.	Grains to the fluid ounce.	Percentage by centrifuge.	Percentage by weight.	Grains to the fluid ounce.
$\frac{1}{4}$	0.005	0.025	22	0.458	2.2
$\frac{1}{2}$	0.01	0.05	22½	0.469	2.25
$\frac{3}{4}$	0.016	0.075	23	0.479	2.3
1	0.021	0.1	23½	0.49	2.35
1½	0.026	0.125	24	0.5	2.4
1¾	0.031	0.15	24½	0.51	2.45
2	0.036	0.175	25	0.521	2.5
2½	0.042	0.2	25½	0.531	2.55
3	0.047	0.225	26	0.542	2.6
3½	0.052	0.25	26½	0.552	2.65
4	0.057	0.275	27	0.563	2.7
4½	0.063	0.3	27½	0.573	2.75
5	0.068	0.325	28	0.583	2.8
5½	0.073	0.35	28½	0.594	2.85
6	0.078	0.375	29	0.604	2.9
6½	0.083	0.4	29½	0.615	2.95
7	0.089	0.425	30	0.625	3.
7½	0.094	0.450	30½	0.635	3.05
8	0.099	0.475	31	0.646	3.1
8½	0.104	0.5	31½	0.656	3.15
9	0.111	0.55	32	0.667	3.2
9½	0.125	0.6	32½	0.677	3.25
10	0.135	0.65	33	0.687	3.3
10½	0.146	0.7	33½	0.698	3.35
11	0.156	0.75	34	0.708	3.4
11½	0.167	0.8	34½	0.719	3.45
12	0.177	0.85	35	0.729	3.5
12½	0.187	0.9	35½	0.74	3.55
13	0.198	0.95	36	0.75	3.6
13½	0.208	1.0	36½	0.76	3.65
14	0.219	1.05	37	0.771	3.7
14½	0.229	1.1	37½	0.781	3.75
15	0.24	1.15	38	0.792	3.8
15½	0.25	1.2	38½	0.801	3.85
16	0.26	1.25	39	0.819	3.9
16½	0.271	1.3	39½	0.823	3.95
17	0.281	1.35	40	0.833	4.
17½	0.292	1.4	40½	0.844	4.05
18	0.292	1.45	41	0.854	4.1
18½	0.313	1.5	41½	0.865	4.15
19	0.323	1.55	42	0.875	4.2
19½	0.333	1.6	42½	0.885	4.25
20	0.341	1.65	43	0.896	4.3
20½	0.354	1.7	43½	0.906	4.35
21	0.365	1.75	44	0.917	4.4
21½	0.375	1.8	44½	0.927	4.45
22	0.385	1.85	45	0.938	4.5
22½	0.396	1.9	45½	0.948	4.55
23	0.406	1.95	46	0.958	4.6
23½	0.417	2.0	46½	0.969	4.65
24	0.427	2.05	47	0.979	4.7
24½	0.438	2.1	47½	0.99	4.75
25	0.448	2.15	48	1.	4.8

that preliminary quantitative testing will not be required save in cases of great excess.

2. With regard to manipulation of the reagents, the two cubic centimetres of fifty per cent. acetic acid should be added to ten cubic centimetres of the urine, the latter being as nearly as practicable of normal acidity, having been thus rendered as previously directed. The importance of proper acidity of the urine before submitting it to the test depends upon the facts (a) that if the urine is neutral or alkaline, the two cubic centimetres of acetic acid may not be sufficient to secure precipitation of all the albumin present, and (b) if the acid is in excess, it tends to dissolve the albumin after its precipitation.

After the addition of the two cubic centimetres of

acetic acid the tubes should be inverted three or four times to insure complete mixture with the urine; then three cubic centimetres of one-to-ten solution of potassium ferrocyanide should be added, the tubes again inverted till well mingled, and then stood aside for ten minutes. Those who are familiar with the behavior of potassium-ferrocyanide solutions in the presence of albumin will recall the fact that precipitation is somewhat tardy as compared with that with most other albumin precipitants. One of the possible sources of error with this test depends upon the above-named fact, because precipitation seems to be much slower in some cases than in others, depending largely upon the varying degrees of acidity of the urine. Observations conducted in this laboratory have demonstrated that if the urine is allowed to stand for ten minutes after the reagents have been added, all the albumin is precipitated. It will also be recalled by those familiar with the ferrocyanide reaction that the latter rarely takes place with the proteids ordinarily found in the urine other than albumin, and therefore this reagent is especially suited for quantitative determinations of albumin. The quantity of albumin in the urine, when excessive, exercises a disturbing influence over all volumetric methods of measurement, it being practically impossible to secure uniform readings with small and large quantities of albumin indifferently. It has for this reason been found better to dilute the urine, in case the volume of albumin exceeds ten per cent., so that said volume shall range below ten per cent. It has been ascertained under the conditions specified for this test that under ten per cent. the results are uniform. If, then, for example, a preliminary test shows twenty per cent. of albumin to be present, the urine should be diluted with two volumes of water, and the product should be multiplied by three before using the table. Minute errors may arise from measurements in diluting the urine, but with due care these should be practically eliminated, especially if the dilutions are made with the burette.

3. Lastly, with regard to packing and measurement: The first and most important essential is an efficient centrifuge. The Purdy electric centrifuge possesses all the essentials for exact work, including carefully graduated percentage tubes, proper radius, and speed indicator to secure uniformly graded speed, and all observations upon which this test is founded were conducted with this instrument. If this is at hand, very few additional suggestions are necessary. If the above-named instrument is not obtainable, one must be employed that possesses certain essential features, or is capable of such modification as will include these essentials, as follows: (a) It will be necessary to have two percentage tubes carefully graduated in tenths of a cubic centimetre of capacity of fifteen cubic centimetres each. These tubes are more accurate if the last two or three centimetres of the tube are drawn out somewhat conically at their tips. (b) The arm of the cen-

trifuge should be so constructed or modified that its radius is exactly six inches and three quarters—that is to say, the linear distance from the centre of the axle to the tip of either tube must be just six inches and three quarters. (c) The motor must be capable of an even and sustained speed of fifteen hundred revolutions per minute, with the required radius, and carrying thirty cubic centimetres of urine. Some reliable method of gauging the exact speed of the motor must be employed. Any centrifuge that fulfills the above-named requirements will give accurate results as indicated by this method and the accompanying table.

It may be stated in conclusion that nearly all the experimental observations upon which this method and table are established have been worked out upon samples of albuminous urine obtained from cases of actual renal disease. The method followed has been that of first carefully obtaining the exact volumetric percentage of the albumin; its careful separation upon a dry filter of known weight; subsequent drying in an oven until it no longer loses weight; then ascertaining the exact gravimetric percentage and comparing this with the previously ascertained volumetric percentage. For the benefit of those who may desire to investigate this subject, but who may not have access to the necessary samples of albuminous urines, it may be stated that solutions of Merck's purified serum albumin in normal urines have given closely corresponding results in this laboratory with those obtained from albuminous urines in cases of renal disease.

Acknowledgment is due my assistant, Mr. Carl Irenaeus, for his efficient and tireless assistance in carrying out the almost endless details of the many observations necessary to the establishment of this method.

57 EAST TWENTIETH STREET, May 15, 1899.

A SEVERE CASE OF PUERPERAL SEPSIS TREATED BY ANTISTREPTOCOCCUS SERUM AND UNGUENTUM CREDÉ.

RECOVERY.

By JAMES D. VOORHEES, A. M., M. D.,

INSTRUCTOR OF OBSTETRICS AT THE COLLEGE OF PHYSICIANS AND SURGEONS,
RESIDENT PHYSICIAN OF THE SIOUX MATERNITY HOSPITAL.

A. McC., twenty-one years old, a primipara, was admitted to the hospital at 1:30 p. m., January 3, 1899, in the first stage of labor. The vertex was presenting, R. O. P., above the brim.

She had a fairly long first stage—twenty-one hours—and gave birth spontaneously to a child weighing seven pounds and eleven ounces.

The placenta was partially adherent and came away incompletely by expression. She was bleeding furiously. The patient had had a bad leucorrhœa during pregnancy, with symptoms of gonorrhœa, and there were small chancreoidal ulcerations just inside the vulva on the right side.

There were two indications to empty the uterus—retained secundines and hemorrhage. Yet there was

the danger of carrying infection from these ulcerations into the uterus. This risk was taken, and, after thoroughly emptying the organ and giving a hot douche, the bleeding stopped.

After delivery the patient's condition was not good. She was restless and pale, pulse 150. She responded, however, to stimulation, and the next morning was in fairly good shape, except for a tender fundus. On January 6th, her third day, there was some odor to the lochia and the temperature was 100.2° F. in the afternoon. She was ordered creolin douches for the vagina three times a day.

January 1th, at 2 A. M., the patient had a temperature of 102.8° F., and her pulse was 136. At 9:45 A. M. she had a severe chill, followed by a temperature of 103.2° F., pulse 160. She was then given chloroform and examined. There was a small abscess in the left vulvovaginal gland. Some excoriations of the vagina and tears of the cervix were covered by a black slough in some places and a yellow exudate in others. A foul discharge exuded from the os. The abscess was opened and cleaned. The vagina was douched. The uterus was thoroughly curetted, douched, and packed with iodoform gauze. Some foul debris had been removed. She was in very bad shape during the operation; the pulse was between 180 and 200. She was actively stimulated. This manipulation was followed by a severe chill and a temperature of 104.5° F.

On the next day, January 8th, the gauze was removed and the uterus douched every two hours with normal salt solution. Chills occurred on this day, and the following one also. Then intra-uterine douches every six hours were started. She was getting vigorous stimulation and nourishment was forced.

On January 11th, the eighth day, she showed phlebitis of the internal saphenous vein near the left knee.

On January 12th three small abscesses from hypodermic injection in the left gluteal region were opened and packed. She now seemed to improve till the thirteenth day, when the temperature dropped to normal, only to be followed by a severe chill.

Chills now started and occurred once or twice a day. She was getting pyæmic. But repeated examinations failed to find a localized suppurative process. The abscesses of the thigh were healed, the phlebitis was well, and there was very little discharge from the uterus and nothing palpable in the broad ligaments. The intra-uterine douching was therefore discontinued. Chills occurred just the same. She looked very badly, and death was expected at any time. The pulse after the chills rose to 160-170.

On January 23d, her twentieth day, a culture was taken from the uterus and examined by Dr. W. H. Park. No streptococci were found, but only a short bacillus, which seemed likely to be the colon bacillus. Blood taken from the right median basilic vein and planted by Dr. James Ewing gave no growth. Thinking that the infection might have been from the streptococci at the start, and the condition of the patient being so poor, we thought it wise to try the anti-streptococcus serum. That of the New York board of health was used. At 1 p. m., January 23d, ten cubic centimetres were injected into the back. The temperature fell to normal, and stayed so for six hours, when another chill occurred.

She was given ten cubic centimetres of serum twice a day till January 27th—nine injections altogether being used. There was no improvement, however. On this

day, her twenty-fourth day, she was still in very poor shape, yet we were surprised at her vitality. The physical examination showed nothing positive. Her lungs seemed normal; the heart's action was feeble, irregular, and intermittent; a systolic murmur was heard over the apex and the rest of the cardiac area. The liver and spleen were large. The abdomen was boggy distended. No tenderness. No masses were felt.

The uterus was astonishingly well involuted, not tender, freely movable, with very little discharge; otherwise the examination was negative.

Diagnosis.—Possibly malignant endocarditis. Hers was not considered a case for laparotomy—in fact, she could not stand such an operation.

Having read of the good results of silver salts in other kinds of infection, and also the remarkable case of puerperal sepsis of Dr. S. S. Jones, read before the New York Academy of Medicine, and published later in the *Medical Record*, February 11, 1899, we thought it worth while to make a trial of this treatment. At 2 P. M. a drachm of unguentum Credé was rubbed into the right groin. Another drachm was used at 10 P. M. The patient seemed to improve immediately. She had no further chills for three weeks. This treatment was continued thirty-four days. It did not effect a cure, for in this time the patient had a number of complications. On January 29th she had a pulmonary infarct of the left chest with considerable pleurisy, requiring morphine and strapping.

On February 10th the small joints of the hands and feet, the wrists, elbows, and shoulders, the ankles and knees were red, tender, and swollen—very painful on motion. There was a papular erythema of the extremities. Splints were applied and morphine was given for the pain. The next day the temporo-maxillary joint was involved. There were no chills nor was there any exacerbation of the temperature. The patient looked deathlike, and her recovery was given up. On February 15th, however, she was much better and the splints were removed. She looked astonishingly well and felt hungry. The temperature was much lower.

On February 17th, her forty-fifth day, the temperature was 102.6° F. in the rectum. Complete examination was negative, except for a large tender tumor in the right lumbar region. This was probably the kidney. Analysis showed the urine to be acid; specific gravity, 1.026; a trace of albumin; five per cent., of pus.

Chills followed for two days.

On February 20th the tumor was smaller and less tender; twenty per cent. of pus in the urine. The temperature now rose for a short period each day till March 4th. The rises were probably due to the retention of pus in the kidney, as the tumor was larger from time to time and there was an intermittent pyuria.

On March 1st the use of unguentum Credé was discontinued.

On March 8th she had her last rise in temperature, 102.8° F.; no pus. After this the kidney was not palpable, and there was very little pus in the urine. She was now gaining rapidly. She got up out of bed March 11th, and was discharged March 23d in first-class condition, eighty days post partum.

Diagnosis.—Puerperal sepsis, pyæmia, phlebitis, gluteal abscesses, pulmonary infarct, general arthritis, and suppurative nephritis.

Remarks.—1. It is to be regretted that no culture was taken either from the blood or from the uterus at

the onset, for certainly there were more virulent germs at work than the colon bacillus.

2. The recovery from such a protracted and severe pyæmia is remarkable.

3. The antistreptococcus serum did no good, nor did it accomplish any harm.

4. The improvement after the use of the inunctions of the silver ointment did not seem to be a coincidence; although it did not effect an absolute and immediate cure, as in Dr. Jones's case, it certainly turned the tide toward recovery. The general condition improved at once. The patient was hungry and more rational. The ointment did not prevent complications, but undoubtedly it fortified the patient and increased her resistance, so that she managed to survive them.

The chills, which had been occurring twice a day, stopped immediately and did not occur again for three weeks, and then they were due to the suppuration in the kidney. These chills were much less severe.

5. The ointment is not a remedy for all cases of sepsis. The preliminary curettement of the uterus, the frequent douching as long as the discharge is profuse and the uterus is not draining well, the forced feeding, and the vigorous stimulation must be used with good judgment at the beginning of the infection and during this method of treatment.

At the Sloane Maternity Hospital we have used the inunctions in one other case. This patient died. She had gangrenous metritis, so general that hysterectomy at the onset alone could have saved her.

6. There were sixty-eight inunctions in this case, a drachm each, Schering and Glatz's preparation of unguentum Credé. There was no depression, no albumin in the urine, no argyria, and there were no poisonous or bad symptoms from its use.

This case occurred in the service of Dr. E. B. Cragin, with whose kind permission I publish it.

447 WEST FIFTY-NINTH STREET.

THE USE OF HOLOCAINE AS A LOCAL ANÆSTHETIC IN EYE, EAR, NOSE, AND THROAT OPERATIONS.*

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BEFORE entering upon my subject to-night I intend to dwell briefly upon the history of cocaine, a drug which up to the present time has been universally used as a local anæsthetic. In 1855, Gaedecke separated from coca leaves a crystalline alkaloid which he called erythroxyline. Five years later Mantegazza and Albert Nieman examined the alkaloid more thoroughly, and the latter named it cocaine. Nieman had at that time

* Read at the meeting of the German Medical Society of the City of New York, March 6, 1899.

already recognized the value of cocaine as a local anæsthetic on mucous membranes. Three years later Moreno y Maiz for the first time employed cocaine hypodermically, and that with very good results. For the following twenty years this very valuable drug was known to only very few persons, and no special attention was paid to it until 1884, when Koller* showed us in numerous publications of his experimental investigations its useful application in ophthalmology. Shortly after Koller, Jellinek,† also an adept of the *alma mater viennensis*, demonstrated the usefulness of cocaine in ear, nose, and throat operations. Those can best appreciate the great achievement of Koller and Jellinek who were formerly compelled to perform cataract extractions or iridectomies without the help of cocaine, and those who, like Tuerk, made their laryngeal examinations and operations with applications of a morphine solution, or, like Schroeter later, with a combination of chloroform and morphine solutions. No great imagination is needed to appreciate all the difficulties and dangers coupled with such a procedure. On this side of the ocean Dr. H. Knapp‡ was among the first who, as a result of his experiments on himself and on his patients, contributed most to the promulgation of its use. But a reaction shortly followed the great enthusiasm for the miraculous properties of cocaine. Numerous reports of unpleasant accidents, yes, even deaths, caused by cocaine came in from several sources. It is evident that a search for a substitute became general. But none of the drugs recommended, such as eucaine, anisine, etc., with the notable exception of holocaine, could be compared in efficacy with cocaine. It was three years ago that Dr. Tauber* discovered holocaine, a drug which promises not only to replace cocaine, but on many occasions to excel it.

I have used holocaine both in my private and dispensary practice since November, 1897. Before I employed it on my patients I tried it on myself and four other healthy persons. I instilled two drops of a one-per-cent. solution of holocaine into my left eye and two drops of a four-per-cent. solution of cocaine into my right eye. Soon a difference in the aspects of both eyes was apparent; whereas the holocainized eye was red and inflamed, the cocaineized eye appeared pale and anæmic. Both eyes became anæsthetic at about the same time. I could not verify the statement of Scherer|| that the onset of anesthesia is earlier in the holocainized eye than in the cocaineized eye. The other subjects of my experiments also gave such contradictory reports as to the rapidity of the onset of anesthesia that I became convinced that both drugs produce their anæsthetic effect in about the same time. In my investigation I found

that the cornea becomes anæsthetic first, then the scleral conjunctiva, and lastly the palpebral conjunctiva. Sensation in these structures returns in the reverse order. Both in me and in the majority of my subjects the duration of anesthesia was a little longer in the cocaineized eye than in the holocainized eye. This last observation stands again in contradiction to that of Scherer, who states that the anesthesia produced by holocaine lasts longer than that produced by cocaine. A further and more striking contrast was evident in the appearance of the two eyes in the following respects: Whereas in the holocainized eye the pupil, the tension of the bulbus oculi, and the fissure of the lids remained unchanged, in the cocaineized eye the bulbus appeared more protuberant and was softer, the pupil was dilated, and the aperture of the lids was considerably enlarged. To compare the effect of holocaine on the accommodation with that of cocaine, I brought the Jaeger test card alternately closer and closer to my eyes, until the letters of Jaeger No. 1 appeared dim and illegible. I found that I could bring the test card fully half an inch to an inch nearer to the holocainized eye than to the cocaineized eye. In the eyes of the younger subjects there was a difference in the distance of approximation of the test card to both eyes of an inch to an inch and a half. When a convex glass of 1 D. was placed alternately in front of each eye, I could read with the cocaineized eye $\frac{2}{3}$ %, and with the holocainized eye $\frac{2}{3}$ %. With the same lens the younger subjects could read with the cocaineized eye $\frac{2}{3}$ %, with the holocainized eye $\frac{2}{3}$ %. After that I had one of my nostrils anesthetized with cocaine and the other with holocaine. The anesthesia set in with me, as well as the other subjects on whom I made the same experiment, generally in five to seven minutes sooner in the cocaineized than in the holocainized nostril. By touching the dorsum of my tongue, the pharynx, and the larynx with cocaine, I felt a bitter metallic taste. There was a sense of choking and of strangulation in my throat. But an application of holocaine to the same structures produced neither such an intensely bitter taste nor any of the other disagreeable sensations.

After this experience I used holocaine on my patients. I soon had an opportunity of using holocaine on a patient with a nasal spur on both sides which obstructed his nasal breathing. I sawed off one spur under holocaine anesthesia, and the other, a few days later, under cocaine anesthesia. The intensity of the anesthesia was the same on both sides, but it manifested itself in the cocaineized nostril eight minutes after the application, while in the holocainized nostril only after fifteen minutes. And, whereas after the use of cocaine the patient experienced a very unpleasant bitter and metallic taste, he was not troubled with these sensations when I used holocaine. We began in the cocaineized nostril to treat a polypoid growth, which was pale and contracted, so that the nasal passage became entirely

* *Wiener med. woch. Wochenschrift*, 1884.

† *Ibid.*

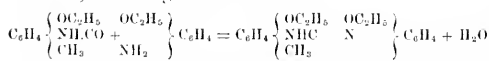
‡ *Arch. of Ophthalm.*, 1884.

* *Centralblatt. f. Augenhe.*, 1897.

|| *Kansas City Med. Index*, 1898.

free, in the holocainized nostril the swelling of the turbinated bodies did not diminish. Both during and after the operation the hæmorrhage in the cocaineized nostril was very slight, but in the holocainized side it was quite considerable. After this I had the opportunity of using at one time cocaine and at another holocaine on a patient suffering from phthisis laryngis, for the purpose of mitigating his dysphagia. The patient was always better satisfied when I used the new remedy, holocaine, for it did not cause an unpleasant bitter, metallic taste in his throat. Afterward I used holocaine in a cataract extraction, in a dissection of a secondary cataract, in tenotomies for strabismus, and in squeezing of granular trachoma. I used it in the removal of tumors of the eyelids, of foreign bodies from the cornea, of granulations and polypi from the middle ear, of nasal polypi, and of hypertrophies of the turbinated bodies; also for the performance of tonsillotomy, for the removal of adenoid vegetations, of laryngeal polypi, etc., always with very good results. I also assisted Dr. H. Knapp in a large number of operations in which holocaine was used instead of cocaine with perfectly satisfactory results.

According to Traube's researches, the chemical nature of holocaine is as follows: Holocaine is a derivative of *p*-phenetidine, and is in close relation to lactophenine and phenacetine. The chemical name of the latter is acetyl-*p*-phenetidine. Holocaine is to be considered as formed by the union of molecular amounts of phenacetine with *p*. phenetidine and the elimination of water, according to the formula:



According to Schlosser,* the product of this union is a beautiful crystalline, strong base, which is insoluble in water and melts at 121° C. The chloride of the substance—which is holocaine—crystallizes in white needles, which are easily soluble in hot water. The saturated solution, which contains only 2.5 per cent. holocaine, is slightly bitter, neutral in reaction, and is not changed by boiling. When in making a solution of holocaine we boil the water in a glass vessel, or if we pour a hot solution of holocaine into a glass vessel, the solution becomes turbid, and the walls of the vessel become hazy and opaque. This turbidity is caused by the fact that the boiling water liberates some of the alkali of the glass, which, in turn, liberates from the solution some of the otherwise insoluble amidine base which constitutes the amorphous sediment. If we wish to avoid the cloudiness, we must use porcelain instead of glass vessels, or, according to Nathan-on,† to use glass vessels which have been previously boiled with muriatic water.

Physiology. According to Heintz,‡ the anæsthetic

effect of holocaine is produced by a paralysis of the terminal sensory nerve fibres, and not secondarily by ischaemia or frigidity, as is the case with some of the other local anæsthetics. He proved this by the following experiment: Having decapitated a frog and cut out its heart, he suspended the frog from a framework so that one of its hind extremities dipped into a one-third-per-cent. solution of HCl; in from two to three seconds after the immersion the leg was suddenly and violently jerked out of the solution. He then bathed the frog's leg in a one-per-cent. solution of holocaine, dried it, then bathed it in a 0.6-per-cent. salt solution, and then again immersed the leg in the one-third-per-cent. HCl; this time the frog's leg was not jerked out of the solution until five to twelve seconds after the immersion. He found that the longer he bathed the extremity in the holocaine solution the longer was the reaction period; that if the immersion lasted one minute, the leg was not withdrawn from the HCl solution at all. Thus he demonstrated that holocaine acts by paralyzing the terminal filaments of the sensory nerves. A one-per-cent. solution of holocaine retards the growth of bacteria, and it is therefore a good antiseptic. When brought into the circulation, holocaine proves to be a powerful convulsive poison, similar to strychnine. The toxic dose of holocaine for mice is 0.001 gramme; for rabbits of two thousand grammes, 0.01 gramme (of cocaine, 0.05 gramme; of eucaine, 0.075 gramme).

In a discussion as to the relative merits of local anæsthetics, eucaine, as compared with cocaine and holocaine, may be left entirely out of consideration, inasmuch as it not only has no advantages over these remedies, but has positive disadvantages. As regards holocaine and cocaine, the results of my investigations on healthy eyes may be briefly summarized as follows: Both cocaine and holocaine possess the common property of paralyzing the terminal filaments of the sensory nerves, and both are therefore good local anæsthetics. For practical purposes there is no great difference between them, as regards the time of onset or the duration of anæsthesia. Nor do they materially differ in the intensity of the resulting anæsthesia. Either remedy may therefore be used indifferently in the ordinary operations on the eye. But whereas the cocaineized eye in my experiment was pale, protruding, of lowered tension, with the pupil dilated and the fissure of the eyelid enlarged, the holocainized eye was red and inflamed, of normal tension, not protruding, pupil normal, and palpebral fissure not enlarged. This difference in the effects of cocaine and holocaine is explained by the well-known action of cocaine as an irritant to the terminal sympathetic nerve fibres, and its consequent vasoconstrictor effects. The pallor of the eyeball is therefore due to the powerful contraction of the blood and lymph vessels following the application of cocaine. The haziness and dryness of the cornea are also due to the vasoconstrictor effect of the cocaine, although the abolition of the reflex

* *Klin. Monatsbl. f. Augenhe.*, 1897.

† *St. Petersburg and Wochenschrift*, 1897.

‡ *Klin. Monatsbl. f. Augenhe.*, 1897.

nictitatory functions of the eyelids, as a result of the anæsthetic condition of the eye, is also partially responsible for them. But neither in my observations nor in the experiments of others was any effect of holocaine on the sympathetic nerves to be observed. From these observations we may derive conclusions as to the indications for the use of either one drug or the other. For the removal of a foreign body from the cornea holocaine is to be preferred, for, unlike cocaine, it does not produce the subsequent disagreeable mydriasis; also for a strabismus operation is holocaine to be preferred, for cocaine causes the muscle to shrink, and thus often permits some muscular fibres to escape the strabismus hook. In the treatment of inflammatory affections of the conjunctiva and cornea, associated with painful blepharospasm, holocaine is of great value, for it not only relieves the spasm and allays the pain, but also acts as an antiseptic, and thus as a curative agent. But, on the other hand, cocaine is to be preferred in the performance of an iridectomy where the arteries appear atheromatous and where we would avoid a considerable hæmorrhage. The vasoconstrictor effect of cocaine, and the diminished tension of the eyeball, together with the subsequent deepening of the anterior chamber, are all factors in favor of using cocaine for the performance of an iridectomy under these circumstances. For the extraction of a cataract where the pupil is small, cocaine is to be preferred on account of its mydriatic action. For the many other operations on and about the eye, these two agents may be used indifferently, unless, indeed, the bactericidal action of holocaine should incline us to use it in preference to cocaine. This latter consideration is sometimes of great importance, especially if we consider the time and trouble it requires to sterilize a solution of cocaine. In choosing our anæsthetic for operations on the ear, nose, and throat, we must consider whether the disadvantage of the freer hæmorrhage following the use of holocaine is more objectionable than the disadvantageous and undesirable shrinkage of the tissues following the use of cocaine. That the shrinkage of the tissues caused by cocaine is at times a disadvantage is illustrated by the following case: A lady of a somewhat nervous disposition, suffering from obstructed nasal breathing, was recommended to me by Dr. L. for treatment. On examination I found an hypertrophy of the posterior tip of the inferior turbinated body. The lady being very sensitive, I applied some cocaine solution to the nostril in which I intended to operate; but on introducing the cold snare, I found that the tumor, which was previously so evident, could not now be seized with the instrument. A second examination showed me that the reason for this was the almost complete shrinkage of the tumor caused by the cocaine. Had holocaine been my anæsthetic, I should have been spared the vexation of having to ask the lady for a second visit for the performance of the operation. Besides the well-known bitter taste and disagreeable choking sensation which co-

caine produces when applied to the nose and throat, it also produces a sensation of dryness which causes the patient to hawk so much that very often profuse hæmorrhage results. All these undesirable phenomena are entirely absent when we employ holocaine. Obviously, then, holocaine is to be preferred to cocaine, not only when we wish to avoid the shrinking effect of cocaine, as in the removal of granulations from the ear, of hypertrophies of parts of the turbinated bodies, of small polypi in the ear, throat, or nose, etc., but also when we wish to avoid the other disagreeable effects of cocaine when operating on the aforesaid organs. It must be evident to all that holocaine is a valuable substitute for cocaine in persons who have unfortunately become victims of the cocaine habit, and in those exposed to the same danger from the frequent use of cocaine for the amelioration of some complaint. In conclusion, I wish to say that during the last year I have employed holocaine instead of cocaine in about a hundred and fifty operations, and have never observed the slightest toxic or alarming manifestation. According to the investigations of several writers, it is not advisable to use holocaine hypodermically. Although holocaine will never entirely replace cocaine, yet it will frequently be of equal service, and, under certain circumstances, will even be preferred to it.

709 MADISON AVENUE AND 358 EAST FOURTH STREET.

ON A COMPOUND MICROSCOPE FOR VIEWING THE EYE.

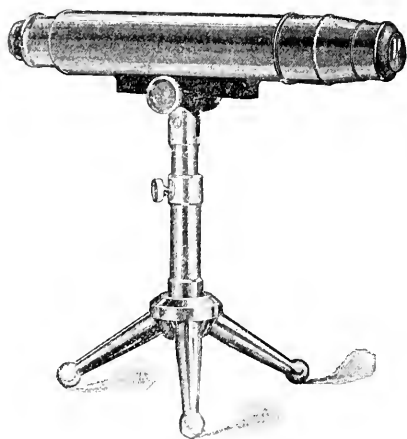
By LUCIEN HOWE, M. D.,

CHICAGO.

As instruments of precision of any real value are always welcome to the ophthalmologist, it seems worth while to call attention to a form of the compound microscope which gives a decidedly better view of the anterior portion of the eye than any similar instrument. I am aware that the compound microscope has already been arranged to view the eye, and I think it was at one of the meetings of the Ophthalmologische Gesellschaft in Heidelberg that I first saw the instrument, but the view given by that microscope was by no means so clear or well magnified as that obtained by the one here referred to. The excellence of this instrument should in fairness be credited to Mr. Henry L. de Zeng, Jr., of this city, and if a name were given to it, it might be called a keratomicroscope, that being a little more convenient than to speak each time of "the large horizontal microscope arranged for viewing the anterior portion of the eye."

The accompanying illustration shows the arrangement of this microscope and indicates at a glance its use. The following are approximately its measurements: The objective consists of two systems. The front or distal lens has a diameter (clear aperture) of

3.2 centimetres, the proximate lens a diameter of 5.1 centimetres, and they are separated from each other about eight centimetres. The two systems combine to give a focal distance of about twelve centimetres and an angle of aperture of thirty-five degrees. This system is connected with the eyepiece by a tube 25.5 centimetres long and twenty-one centimetres in circumference. Into this outer tube there is fitted a draw tube. There are two eyepieces. One has a focal length of about nine centimetres, and gives a minimum amplification of twenty diameters to a maximum of about fifty, according to the position of the draw tube. The other eyepiece has a focus of 2.5 centimetres, giving a minimum amplification of fifty diameters or a maximum of about one hundred and twenty-five, also according to the position of the draw tube.



The microscope is mounted horizontally on a firm tripod attached to an upright bar. As this bar can be lengthened or shortened, the microscope can be lowered or raised, and it swings horizontally on the axes of the bar. There is a hinge joint allowing the elevation or depression of the tube at any angle, and by means of a rack-and-pinion adjustment it can be pushed forward or backward. In a word, the microscope can at once be brought into any position desired.

When making an examination, the patient faces the instrument, the eye being approximately near the focus of the objective. The results are better if the chin is placed on a head rest, such as is provided for the perimeter, or, still better, if the whole head is also steadied by such a head rest as was suggested by Stevens for his "tropometer." The results are also more satisfactory if the illumination is good. Ordinary daylight is sufficient for most purposes, but, if specially good views are desired, these can be obtained by bringing a shaded electric light within a foot or two of the patient's head, or by allowing the light coming through a double-con-

vex lens to fall obliquely on the eye. While these details are given concerning the most desirable position of the patient and the degree of illumination, it should be borne in mind that such care is by no means essential.

The patient having been seated, the head adjusted, and the light arranged, the objective is brought within a few inches of the eye, and almost immediately the direction and the focus are easily obtained. The view presented is quite striking to one who for the first time uses a microscope in this way, though with the ordinary pocket lens we are accustomed to see one somewhat similar to it every day.

The advantages of this compound microscope over the pocket lens, or over any other compound microscope constructed for this purpose, are: First, in the degree of amplification. This is far beyond that possible to the pocket lens, unless, of course, for the small point, more or less imperfectly defined, which is immediately at the focus. Second, in the clearness of definition. The careful correction of spherical and chromatic aberration gives us a view of the outer portion of the eye which is remarkable for distinctness and beauty. Third, in the size of the field, as indicated by the angle of aperture already described. With low magnification the entire cornea and iris are easily visible, except the segment usually covered by the upper lid, and even when the amplification is greater the field is proportionately large.

As to the real value of the instrument, I would say, first, it is probably of some use in observing physiological variations in the size and form of the pupil.

As to this point, it would seem almost impossible to obtain any new data after the careful studies made by Leber, Aubert, and other investigators. I must confess, however, that before using the microscope in this way, I never appreciated the almost perpetual motion visible in the normal iris when moderately contracted. Thus, if the pupil be illuminated only from the side with a moderate light, the rest of the room being partly darkened, it is easy to count fifteen, eighteen, to twenty or more distinct contractions, with corresponding dilations, within thirty seconds. By simple experiments it is easy to determine that many of these contractions are due, as we should expect, to efforts at accommodation; but whether others are due to variations in the blood current, or perhaps indirectly to mental processes, it is difficult to ascertain. It would form an interesting field for investigation.

Not only are the variations in the size of the pupil more easily seen than with the naked eye, but in certain cases it is interesting to notice the changes in form. Eversbusch long ago called attention to the fact that the human iris occasionally tends to resemble in structure that of the carnivora—namely, that there is sometimes a distinct interlacing of the sphincter fibres above and below. This tendency to the oval form I have noticed with the microscope when a mydriatic is commencing to have its effect.

Second. A microscope thus mounted is of assistance in studying certain pathological conditions. Among these I would specially mention:

(a) Small opacities on the cornea—although for this, or for detecting foreign bodies, the instrument is not as useful as might be expected, and infinitely less convenient than the pocket lens.

(b) The extent or changes in ulcerative processes in the cornea. The edges of an ulcer, its depth, and the character of the deposit, can not only be seen better than with the pocket lens, but, when the reparative process begins, the flatness of the field shows very beautifully the loops of fine capillaries which advance from the corneal margin, changing sometimes from day to day.

(c) Edema of the iris, circumscribed or general, with or without exudation, can be seen readily. The crypts are either partly filled or obliterated with deposit, the trabeculae in the lesser circle become indistinct, and the circular contraction grooves near the peripheral margin show beautifully the effects of the swelling. By observing these at intervals it is possible to notice changes in the iris which, as a whole, ordinarily escape detection.

(d) It is interesting to contrast the normal active pupil with one torpid or paralyzed. Our ordinary methods of testing the pupillary reaction are certainly inaccurate, and if, as it appears, we have in the compound microscope, thus arranged, an instrument for recognizing imperfect motion of the iris, it will probably give an indication as to incipient diseases of the optic nerve, assist in the differential diagnosis of a toxic or hysterical amblyopia, and in the detection of simulated blindness.

Third. The microscope is certainly of value in photographing the anterior portion of the eye, in either a normal or an abnormal condition. Any one who has attempted work in this direction will appreciate the advantage of having sufficient amplification with a clear, flat field. With this microscope a photograph has been taken of the iris more than twenty-five centimetres in diameter.

In referring to this microscope and the work which it will do, I have endeavored to be rather moderate in the statements, remembering that in the description of any instrument one is apt to magnify its virtues even more in proportion than the instrument will magnify its object. Apparently, however, it is sufficiently useful not to be consigned to the limbo of discarded scientific toys, but to be of some real value to the working ophthalmologist.

Dr. Osler the Cavendish Lecturer.—The Cavendish Lecture of the West London Medical-Chirurgical Society on Cerebro-spinal Fever was, we learn from the *British Medical Journal* for June 3d, to be delivered on June 16th at the town hall, Hammersmith, London, by Dr. William Osler, F.R.S., of Johns Hopkins University.

THE STATE OF THE GASTRIC SECRETIONS IN ORGANIC DISEASE OF THE HEART.*

By FRANK H. MURDOCH, M.D.,

PITTSBURGH, PA.

DURING the last few years I have examined the gastric contents of twenty-three persons with organic heart disease. Hüller was of the opinion that free HCl was absent in almost all cases of valvular heart lesions, but subsequent examinations made by other observers have shown that this is not the case. For example, Einhorn, in twelve cases examined, found that free HCl was present in eight and absent in four. Adler and Stern, in twenty cases examined, found free HCl always present in sixteen, variable in two, and always absent in two cases. Hemmeter found the gastric secretions normal in eight cases of mitral regurgitation, two of aortic regurgitation, and two of mitral insufficiency.

In my own cases an aortic systolic murmur was present in five. Free HCl was present in four of these cases and absent in one.

A mitral systolic murmur was found in eight cases. Free HCl was absent in one case, subnormal in one, and nearly normal in the others.

A mitral presystolic murmur was found in five cases. Free HCl was absent in one case, normal in one, and in excess in the other three.

An aortic and mitral systolic murmur was present in four cases. In one, free HCl was present in excess, and absent in the others. Of the three cases in which HCl was present, in one the total acidity was ten, and rennet was absent. In the two others rennet was present; the total acidity in one was twenty, and in the other seventy-two.

Simple hypertrophy of the left ventricle, due to prolonged muscular exertion, was present in one case. HCl was absent, rennet was present, and the total acidity was four.

It will be seen, therefore, from the record of these sixty-seven cases, that there is no constant relation between the state of the gastric secretions and any one form of organic heart disease. Neither does the presence of heart disease seem in many cases to stand in the way of the recovery of patients suffering from the various forms of stomach trouble, for my records show that such patients get along just as well on the way to recovery as those whose hearts are in a normal condition.

Of the twenty-three patients examined, three came in only a few times, ten were seen but once, three were greatly improved, and seven made complete recoveries.

In those who recovered or were greatly improved, intra-gastric fermentation was noted in seven, lavage and faradization in one, and lavage alone in two. The patients were directed to abstain from bathing, exercise, etc., and the diet was in each case carefully regulated.

* Read by title at the annual meeting of the American Gastro-Enterological Association, Washington, D.C., May 18, 1899.

Therapeutical Notes.

Uropherine as a Diuretic for Children.—Dr. A. Schmid (*Klinisch-therapeutische Wochenschrift*, 1898, No. 43; *Monatsberichte über die Gesamtleistungen auf dem Gebiete der Krankheiten des Harn- und Sexual-Apparates*, iv, 4, 1899) has found uropherine salicylate quite as effective as the more expensive diuretin. He gives the following formula:

R Uropherine salicylate . . . 75 grains;
 Water 1,800 "
 Vanillin $\frac{1\frac{1}{2}}{100}$ of a grain;
 Mucilage of acacia, } each, 825 grains.
 Syrup, }

M. A teaspoonful three or four times a day. The benzoate of uropherine may be used if there is an idiosyncrasy for salicylic acid.

Sugar in Dermatology.—Hodard (*Semaine médicale*, 21, 1899; *Gazzetta degli ospedali e delle cliniche*, May 18th) has found great service from the siccativ and keratoplastic properties of powdered sugar when added to various unguents for use in moist eczema, impetigo, ecthyma, and other vesicular and pustular dermatoses. The author uses the following formula:

R Lanolin,
 Vaseline,
 Powdered sugar, } of each . . . 300 grains;
 Oxide of zinc,
 Glycerin, }
 Sulphur, } of each 150 "

M.

For Cystitis.—Ribiero (*Dunghlison's College and Clinical Record*, April 15th) recommends:

R Salol 150 grains;
 Salipyrine, } of each, 75 "
 Bromide of camphor, }

M.

Divide into twenty capsules. One to be taken every three hours.

Also: Benzoic lemonade made in concentrated decoction of *uva ursi* (bearberry) and hordeum (barley). Four to six tablespoonfuls daily.

For Epididymitis.—The *Riforma medica* for May 4th ascribes the following to Neumann:

R Extract of belladonna 15 grains;
 Simple ointment 300 "

M.

For local application.

The Treatment of Granular Conjunctivitis.—The *Riforma medica* for May 8th attributes the following to Bloebaum:

R Sulphate of copper, }
 Salicylic acid, } of each . . 1½ grain;
 Cocaine,
 Vaseline 150 grains.

M.

Anoint the conjunctiva therewith.

For Bronchorrhœa.—Maragliano (*Riforma medica*, May 15th) recommends:

R Benzoic acid 30 grains;
 Tannin 15 "

M. Divide into five powders. One to be taken every two hours.

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THE SIGN OF THE TONGUE IN INFLUENZA.

In the *Journal de médecine interne* for May 1st D'Hotel quotes the Arab proverb, "Death enters by the mouth," and asks, "May not the same formula be true of influenza?"

The author's attention was directed some time since to a special form of angina which with general febrile disturbance he found to precede by a period of from three to five days the gastro-intestinal and thoracic complications, which, as a rule, are only secondarily developed in influenza. He therefore set to work to investigate whether these prodromes of pharyngitis and stomatitis noticed by him had been general, or were merely a local manifestation of the epidemic. In the course of his investigations he found that alongside of the before-mentioned symptoms, which appeared inconstant, there was uniformly present in both slight and grave cases a condition of the tongue so peculiar and characteristic as to be almost pathognomonic.

This condition consisted in the formation, on the next day or the next day but one after the invasion, of a white, opalescent coating, more or less thick, and covering the centre of the tongue. Subsequently, according as the attack was light and cut short, or became prolonged and complicated, the coating diminished, beginning from the tip, or remained. This sign was the last to disappear; and according to the author it was not rare to find, three weeks after the invasion, a whitish triangle still at the base of the tongue, bearing testimony to its previous condition, and indicating that the patient was yet in a latent morbid condition, however much his functional condition might appear to have returned to normal; a condition in which any imprudence, a chill, etc., might light up a broncho-pneumonia or other complication.

But the most important character of this sign was its chemical reaction. Not only was it very persistent, in spite of laxatives and intestinal antiseptics, but, while the reaction of the buccal fluid normally gives a neutral or only very faintly acid reaction, as soon as the fur appeared the test paper reddened strongly, especially when rubbed against the fur. This acid reaction diminished as the disease abated, in ordinary

cases beginning to weaken from the sixth or seventh day. When the reaction returned to normal, however, if there was the least patch of fur remaining on the tongue, the litmus would still redden strongly on being rubbed against it.

From these facts the author naturally reasoned to an alkaline treatment of influenza, and according to his experience that has proved of the greatest possible value. The frequent administration of alkalis in sufficient doses, while they had little effect locally upon the tongue, merely cleansing it without removing the coating, he found to produce a lessened duration of the disease, a more free and prompt restoration to health, and a much greater infrequency of complications. Even when complications were already declared, this treatment appeared to be markedly beneficial, more especially in thoracic complications of all kinds.

It seems to us that the accuracy or otherwise of the author's observations should be easily established, the correctness of the reaction test being especially amenable to general investigation; while the course of treatment suggested by him, being a rational deduction if his premises are sound, can with equal ease be put to a practical test for verification. The investigation is one which can be carried out without effort by the vast mass of general practitioners, who, as it happens, have the largest practical acquaintance with the disease.

THE RIGHT OF WAY FOR THE INFIRM.

THE danger incurred by pedestrians in crossing the crowded thoroughfares of New York is growing greater and greater almost day by day. It is moderated to a certain degree during the summer months, when the carriages of the fashionable people are withdrawn for a time, and when traffic is not quite so brisk as it is during the trade season, but it is sure to be renewed and to be worse than ever by October. It seems to be too late to correct the asinine plan on which that portion of the town that lies between Washington Square and Central Park was laid out, whereby were provided plenty of cross-streets for travel over the short distances from the East River to the North River, while the streets running lengthwise of Manhattan Island were made few and far between, although the least approach to foresight ought to have shown that it was by them alone that the great preponderance of travel would have to be effected. As a general rule, the law seems to regard him who is traveling by the least manageable means of locomotion as entitled to the right of way. Now, a pedestrian's own legs are regarded as more thoroughly under his control than horses or any other form of traction power, hence,

but for certain restrictions as to the speed of vehicles, the pedestrian is expected to take care of himself. This he can generally do if he is an able-bodied man and not under the influence of liquor, although even such a person finds it very difficult at times.

The result of all this is that motormen, drivers of horses, bicyclists, and all who are not on foot insist that pedestrians must keep out of their way. There would be some excuse for this stand if all pedestrians were in possession of an active young man's powers, but no discrimination is made in favor of those who are handicapped with physical disabilities, persons infirm from age or other causes, and infants that have to be intrusted to nurse maids. It is no more than just to say that for the most part drivers of vehicles show special consideration for pedestrians who are obviously infirm. But this is not enough: there are thousands of men and women in the borough of Manhattan who betray no infirmity to the cursory observer, but, for all that, are the subjects of some disability which makes it highly dangerous for them to venture upon any attempt at agility. It may be that their disability interferes seriously with their perceiving in what direction they ought to dodge in order to escape being run down. Possibly it is nothing more serious than the epiphora which afflicts many a person yet in the prime of life on exposure to a cold wind. Fancy such a person trying to make his way home from his place of business between five and six o'clock of a stormy winter afternoon! The sidewalks and the crossings may be slippery or slushy. One hand is overtaken with the management of an umbrella that persists in playing the weathercock; the other hand is constantly on the alert to keep the man's hat on his head, vigorously sopping the watery eyes with the handkerchief ever and anon, to enable them to perform their function to some feeble degree under the blinding glare of the arc lights. When he comes to a crossing, he has to glance rapidly in four different directions, avoid mounds of ice and puddles, manage his hat and umbrella, and keep out of the way of a never-ending procession of trucks, cabs, cars, etc. He has to struggle with a difficult and dangerous task; yet, there is nothing about his general appearance to commend him to any tenderer consideration than is accorded to the most agile boy.

We believe this unnecessary peril to life and limb can be done away with in great measure. Certainly some attempt at doing away with it ought to be made. It seems to us quite right and feasible that some competent authority, the board of health, for example, should be empowered to issue to infirm persons some small and readily portable object—perhaps a red cross—made of

wood—the display of which should serve to warn the drivers of vehicles that the bearer had the legal right of way. Of course, such a device would have to be accompanied by a license, to be shown on demand as evidence that the person was not fraudulently profiting by somebody else's infirmity—in short, to bear the same relation to the emblem that a dog license bears to the tag on the animal's collar. We would have the emblem and the license obtainable only on satisfactory medical evidence of the existence of real disability, and we would have the holder's right of way made as unquestionable as that of a mail wagon, a fire engine, or an ambulance wagon.

THE BIOLOGICAL BASIS OF SEXUAL ETHICS.

The *Maryland Medical Journal* for May 13th, in an editorial referring to the annual recrudescence of sexual assaults by negroes upon white women, which occurs, it would appear, chiefly in the months of May and June, says that the anatomical and physiological conditions of the African must be understood, his place in the anthropological scale realized, and his biological basis accepted as being unchangeable by man before we shall be able to govern his natural uncontrollable sexual passions. When education and religious teachings change the biological basis of his color, they will also be able to change the physiological reason for his annual outbreak of sexual madness. To ignore the negro's inherent and peculiar sexual organization, it says, is to court failure; to accept boldly, frankly, and scientifically his ancestral traits, and to control him accordingly, it asserts to be the only rational, safe, and moral treatment of the negro question. This reasoning appears to us to be perfectly sound, but it is only part of a very wide subject; for the ignorance and willful overlooking of the overmastering influence of Nature in temperament, whether racial or individual, is so widespread that we believe a large part of the sexual irregularities occurring habitually among white races also must be attributed to the persistent exclusion of a biological basis from our codes of ethics or morals.

The normal state of man is one of absolute individuality. But when man emerges from an isolated existence and congregates in masses, it is obvious that the sovereign liberty of the individual must be at least so far limited that no one, in exercising it, shall be permitted to invade the liberty and equal rights of another. In the natural struggle to effect this end have been evolved morals or ethics—for the two are identical in strict meaning, whatever distinction conventionality may have erected between them—but to be effective

such morals or ethics must rest upon a biological basis, with due regard to circumstances and surroundings. The morals, ethics, or customs which different races of men, inhabiting widely removed countries and existing under widely diverse physical, climatic, and social environments, have evolved, necessarily differ in themselves very widely. Evolution is a slow process, and, as a race learns to survive by its aptness in adjusting itself to its environment, hereditary instincts grow stronger and stronger, until they become themselves Nature, and as hard to divert in another direction as they were hard to be arrived at in the first instance.

It is the smallness of grasp, the narrowed field of observation, that is responsible for most of the dogmatic theories that sway people's minds in varying directions when dealing with subjects such as this. What idea of the liver would a man attain to who, never having seen the organ as a whole or in macroscopical section, nor having even examined it microscopically under a low power, were to theorize concerning it from the laborious study of a microscopical section under a sixteenth-inch oil immersion lens? In nearly all controversies of this nature the rock upon which all parties split is the confinement of their view to microscopical sections, whereby they lose that sense of proportion and harmony which is only to be gained by beginning with the general inspection and proceeding by degrees to a more and more minute and detailed investigation.

If ethics is regarded in its proper sense as conformity with the normal in natural laws, then biology is the first consideration in the study thereof, the animal world the next, then the mammalia, and finally man, his races, their respective divisions and subdivisions, each and all carefully considered in relation to their circumstances and surroundings and impelling forces of every kind.

We do not ignore differences of racial or individual constitution in dealing with questions of food, sleep, or other physical needs; and, surely, to ignore the essential racial or individual differences in the sexual instincts when trying to control them for the benefit of the community at large is illogical, and, as it seems to us, can be only mischievous, whether in respect of different races or of different individuals of one race.

We do not mean to assert for one moment that these considerations should lead us to forego punishment in this any more than in other questions of breaches of law which endanger the public welfare, but that in dealing with and legislating for the prevention of such offenses due regard should be had to those inherent factors which are in constant operation, and that for such legislation to prove effective it must be in accordance therewith. We do not legislate for the proper control

and safeguard of explosives without taking into consideration the peculiar nature and conditions of their several explosive properties.

THE WASTE-PAPER NUISANCE.

THE extreme cheapness of paper, caused by the use of wood pulp in its manufacture, and its practical valuelessness after having served its original purpose, are very much in evidence in some sections of our large cities, particularly in the suburbs and wherever there is a vacant lot. It is blown about by every gust of wind, and collects under stoops and in fence corners, where it is sometimes set afire by mischievous or thoughtless urchins, to the peril of neighboring property. In some parks and groves resorted to by "basket parties" it also accumulates to such an extent as to rival the fallen leaves of autumn, but, unlike them, to be a positive eyesore. It seems to be as ubiquitous and uncontrollable as the English sparrow. It is untidy and dirty, and may under some circumstances act as a disseminator of disease. No effectual remedy for this evil has hitherto been devised, but we shall suggest a plan that, if adopted, might mitigate it to some extent. We propose the making of large grated iron urns, swinging on trunnions, into which papers could be put and burned. They could be made ornamental, and have a metallic label reading, "Burn papers herein," or something to that effect. The object of having them swing on trunnions is to empty them of stones or other incombustible matter that might get into them. If they were placed in picnic grounds, the children would see that all papers were consumed. They might even be put in suburban streets in proper places. In this case they should be heavy and firmly secured, to prevent their easy destruction or removal. All children like to play with fire; give them a safe, interesting, and useful way of gratifying their inclinations in this line, and they will hunt for the materials. Some police supervision is, of course, implied.

A PECULIAR MODE OF MASTURBATION.

DR. LOUISE DROUILLARD (*Woman's Medical Journal*, June) relates the case of a young woman of twenty-two, of bad family antecedents, who had been attacked with psychopathic symptoms coincident with menstrual derangement, and for some time had been in an asylum. When seen by Dr. Drouillard, the patient manifested choreic movements of the hands, sometimes of one hand, at other times of both, terminating by curious manipulations of portions of the face. The dorsum of the thumb was placed in the centre of the cheek, then with the middle finger pressure was made alternately on the tip of the nose and the tragus of the ear. After manipulating a few times in this way, the patient "would fold her hand in her lap with a far away pensive expression on her face, lasting some five minutes." A thorough investigation elicited the fact that the patient could produce sexual excitement and satisfaction by the manipulations before referred to. She did not seem to have any idea of wrongdoing, but was ashamed and distressed when the nature of her act was explained to her. This case calls attention to a possible explanation of many otherwise baffling psy-

chic on the part of young children, and should keep the practitioner ever on his guard in anomalous cases for possibly hitherto unsuspected methods of inducing sexual erethism.

PETROLEUM DRINKING.

THERE seems to be no limit to the extent to which people will go in their efforts to "steal away their brains" for a time. Not only alcohol in its various palatable forms, but even the methylated alcohol used for lamps, ether, sal volatile, and other things are used to produce that condition of inebriety whose chief charm would appear to be the banishment of all objectivity and the induction of a state "the world forgetting, by the world forgot," though occasionally the latter part of the formula is far from being attained. In Paris it would seem that there is danger of petroleum drinking becoming a craze. One would think the stuff was too nauseous to tempt any one's appetite. It seems that the chief advantage is supposed to lie in the fact that, while the subjective stage of inebriety is induced, it leaves no headache in the morning or other depressing feeling. Whether it has any ultimate injurious effects it is, of course, at present too early in the history of the vice to say; but whether it does or not, it is an evidence of the great craving for the production of an abnormal state, in which the objective relations are dulled and deadened, and the individual is, as it were, thrown back on his own subjectivity, with senses, feelings, and emotions dulled and energies rendered compulsorily quiet.

The inebriety that comes from wines is a natural process, in this sense that it is usually the taste that first attracts, and the systemic effects that are found to be pleasurable follow subsequently. But in this new vice it must be a deliberate seeking after the abnormal deadened condition that prompts to it. We fancy that many of the excesses that are common are the inevitable result of centralization and overcrowding of masses together in cities, and the increasing struggle thereby rendered necessary to provide for artificially aroused cravings. The truest movement toward temperance would, in our opinion, be a movement from the towns and artificial conventional life back again to the country, with simpler needs and less "hustling" to satisfy them. However, such a condition is unattainable until Nature by its own methods rectifies the disturbed balance and produces the desired results. Meanwhile, we suppose all that can be done to stem the evil is to try to educate the people to the personal injury they are doing to themselves, and to preach contentment with simpler conditions of life.

ASPIDIUM SPINULOSUM IN TAPEWORM.

LAUREN (*Therapeutisch. Monatsch. Bz.*, April) has studied the effects of another relative of *Filaria*, the *Aspidium spinulosum*, in tapeworms. He extracted eight hundred and thirty-seven colored powder of the fern, obtaining a very fine granules of seed of a brown color. Of the same color the granules, so being as he was from the worm, and the color of the worm later took a dose of the powder. A very large *Brachycephalus litis*, about twenty centimeters long, came away with its head. Other specimens of the worm with it are referred to, and it was found that it was not a new record, but that it was a very common phenomenon. There was a record of a similar case in *Filaria*.

UNLICENSED PRACTICE IN A PARIS HOSPITAL.

THE Paris newspapers have recently discovered that an individual engaged in the oil trade has been practising medicine as a specialist in eye and ear diseases and as an accoucheur, and that he has been able to benefit himself substantially by referring to his connection with the Lariboisière, at which hospital he was for a long time one of the most assiduous attendants at the clinics, posing as a retired naval surgeon. After a time he was allowed to assist in dressing wounds, and finally in operations. It was at last discovered that he had no medical qualifications, and that he had already been fined for illegal practice, and then he got his *congé*. Several of our Paris contemporaries, including the *Progrès médical* and the *Gazette médicale de Paris* for May 13th, comment on this remarkable occurrence, and with perfect justice, it seems to us, complain of the laxity of administration which admits persons without any sort of credentials to the hospital clinics. It is undoubtedly an abuse to be guarded against most sedulously.

SCABIES OF THE CORNEA.

SUCH an affection as this is undoubtedly among the greatest of rarities. In a case reported by Sämisch (*Klinische Monatsblätter für Augenheilkunde*, 1898; *Presse médicale*, May 6, 1899) the lesion simulated a streak of keratitis and was treated accordingly, but without benefit. Then citrine ointment was employed. This aggravated the pain, but it seems to have loosened the acarus, a female with eight eggs, which was removed. The patient, a farm laborer nineteen years old, had no cutaneous manifestation of scabies, and none of his associates had any.

THE PRESERVATION OF SCIENTIFIC DOCUMENTS.

DR. MARCEL BAUDOUIN, in the *Gazette médicale de Paris* for May 20th, refers to a fire which recently occurred in the library of the French Chamber of Commerce which, while inconsiderable in itself, nevertheless resulted in the destruction of many important documents by fire and water. Dr. Baudouin pleads for incombustible libraries, and concludes with the remark: "If we were in New York, such a building would have been constructed long ago."

GENERAL MUSCULAR PARESIS DUE TO INFLUENZA.

TRULY, influenza is a protean disease as regards its manifestation and sequelæ. M. Boutry (*Bulletin de la Société médicale des praticiens*, January; *Nord médical*, May 1st) reports a case in which it gave rise to a generalized semi-paralysis that became serious by reason of its involving the respiratory muscles. It was five months before the patient could be considered as cured.

BUTTER AS A VEHICLE OF THE TUBERCLE BACILLUS.

It seems that absolute reliance can not be placed on past refutations of Obermüller's allegation that the butter found in the markets contains tubercle bacilli as a rule. Dr. L. Rabinowitch (*Deutsche medizinische Wochenschrift*, 1899, No. 1; *Centralblatt für in-*

nere Medizin, May 20th) reports the general freedom of Berlin butter from the bacillus, but says also that all the varieties of butter obtained from a certain large establishment contained the bacilli, together with unusually large numbers of other bacteria. We may infer, therefore, that it is not always the dairyman that is responsible for the contamination.

FLOWERS AND DISEASE GERMS.

At a recent meeting of the French Academy of Sciences (*Presse médicale*, May 10th) M. Domingos Freire stated that flowers harbored numerous saprophytic and pathogenic germs. In a rose he had found the *Streptococcus pyogenes*, and in another flower the *Bacillus pyocyaneus*. He suggested that there might be some subtle pigmentary relations between microbes and the flowers they infested, and declared that several sorts of microbes gave out the odors of such flowers. We hope that M. Freire's observations will not injure the florists' trade.

HYSTERICAL EXOPHTHALMIC GOÏTRE.

It is doubtless well to look upon exophthalmic goitre not as a distinct entity, but as the expression now of one morbid state and again of another. This was insisted upon by M. Debove at a recent meeting of the Hospital Medical Society of Paris (*Progrès médical*, May 6th). He related a case in which the affection seemed to have been of hysterical origin. It yielded readily to iodine injections.

THE TUNING FORK AS A TEST OF AUDITORY POWER.

It is somewhat unsatisfactory to be told that a patient could hear the ticking of a watch at a certain number of inches from the ear. At the recent meeting of the French Society of Otology, Laryngology, and Rhinology (*Indépendance médicale*, May 10th) M. Bonnier proposed the use of a tuning fork of a hundred double vibrations to the second. The proposal seems to us well worthy of acceptance.

MYELOSIRINGOSIS AND RECURRENT LUXATION OF THE SHOULDER.

It is well to bear in mind that in myelosyringosis, commonly called syringomyelia, habitual luxation of the shoulder is so common as to be of distinct diagnostic value. Dr. H. Schrader (*Beiträge zur klinische Chirurgie*, xxiii, 1; *Centralblatt für Chirurgie*, May 27th) reports two cases of his own, in only one of which was the initial dislocation of traumatic origin. On examination with the Röntgen rays, both the head of the humerus and the cotyloid cavity were found flattened. The author refers to thirteen other cases on record, six of which were first occasioned by injury, and five of which were known not to have been.

ITEMS.

The Richmond Academy of Medicine and Surgery.—

At the last regular meeting, on Tuesday evening, the 13th inst., a Report of a Case of Meningitis with presentation of patient was made by Dr. J. E. Warren.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending June 10, 1899:

DISEASES.	Week ending June 3.		Week ending June 10.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	13	5	12	3
Scarlet fever.....	214	11	188	19
Cerebro-spinal meningitis.....	0	13	0	12
Measles.....	420	19	422	30
Diphtheria.....	219	46	227	37
Croup.....	7	10	10	7
Tuberculosis.....	142	139	134	137
Small pox.....	11	2	6	3
Chicken-pox.....	36	0	52	0

The Drug Clerks and Shorter Hours.—We understand that the governor has declined to accept in its present form the bill which the legislature recently passed to provide for the enforcement of shorter hours for drug clerks.

Marine-Hospital Service Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending June 10, 1899:

Small pox—United States.

Mobile, Ala.....	May 31-June 3.....	2 cases.	1 death.
Los Angeles, Cal.....	May 27.....	1 case.	
Washington, D. C.....	June 3-4.....	3 cases.	
Jacksonville, Fla.....	May 27.....	1 case.	
Savannah, Ga.....	May 29-June 6.....	10 cases.	
Evansville, Ind.....	June 3.....	5 "	
Louisville, Ky.....	June 1.....	9 "	
Jalisco, La.....	June 3.....	1 case.	
Shreveport, La.....	June 3.....	2 cases.	
Baltimore, Md.....	June 3.....	2 "	
Boston, Mass.....	June 7.....	2 "	
Fall River, Mass.....	From outbreak to June 3.....	18 "	
Swampscott, Mass.....	May 31-June 3.....	2 "	2 deaths.
Minneapolis, Minn.....	June 3.....	2 "	
St. Louis, Mo.....	May 29-June 5.....	8 "	
Omaha, Neb.....	May 29.....	1 case.	
New York, N. Y.....	May 29-June 3.....	15 "	
Charlotte, N. C.....	May 31.....	1 death reported.	
Columbus, Ohio.....	June 3.....	13 cases.	
Massillon, Ohio.....	June 3.....	1 case.	
Oklahoma City, Oklahoma.....	June 1.....	1 "	
Ponce, Porto Rico.....	May 17.....	1 "	
Providence, R. I.....	June 3.....	1 "	
Newport News, Va.....	May 31-June 8.....	2 cases.	
Norfolk, Va.....	May 31-June 8.....	6 "	1 death.
Portsmouth, Va.....	May 31-June 8.....	3 "	

Small pox—Foreign.

Antwerp, Belgium.....	May 8-28.....	11 cases.	6 deaths.
Rio de Janeiro, Brazil.....	Apr. 1-7.....	5 "	
Liverpool, England.....	May 6-13.....	1 case.	
London, England.....	May 6-13.....	1 "	1 death.
London, England.....	May 13-20.....	1 "	1 "
Athens, Greece.....	May 13-20.....	23 cases.	9 deaths.
Bombay, India.....	Apr. 25-May 2.....	3 "	
Calcutta, India.....	Apr. 22-29.....	1 death.	
Madras, India.....	Apr. 29-May 5.....	1 "	
Chilpanhuigo, Mexico.....	May 13-21.....	3 deaths.	
Mexico, Mexico.....	May 2-28.....	11 "	8 "
Bluefield, Nicaragua.....	May 8-15.....	1 case.	
Bluefield, Nicaragua.....	May 20-27.....	1 "	
Odessa, Russia.....	May 13-20.....	14 cases.	2 "
Beirut, Turkey.....	Apr. 29-May 6.....	1 case.	
Constantinople, Turkey.....	May 1-15.....	1 "	

Cholera.

Bombay, India.....	Apr. 25-May 2.....	1 death.
Calcutta, India.....	Apr. 22-29.....	25 cases.
Madras, India.....	Apr. 29-May 5.....	8 "

Yellow Fever.

Rio de Janeiro, Brazil.....	Apr. 1-7.....	35 cases.	22 deaths.
Puerto Principe, Cuba.....	June 5.....	1 case reported among United States troops.	
Cordoba, Mexico.....	May 29.....	Reported present.	
Vera Cruz, Mexico.....	May 13-20.....	68 cases.	26 deaths.

Plague.

Muscat, Arabia.....	Apr. 12.....	2 cases.	
Alexandria, Egypt.....	May 22.....	2 "	
Bombay, India.....	Apr. 25-May 2.....	323 deaths.	
Calcutta, India.....	Apr. 22-29.....	107 "	
Taichu, Formosa, Japan (pre- fecture).....	From outbreak to date.....	1,484 "	1,076 "
Tainan, Formosa, Japan (pre- fecture).....	From outbreak to date.....	1,484 "	1,076 "
Taipei, Formosa, Japan (pre- fecture).....	From outbreak to date.....	1,484 "	1,076 "
Tamsui, Formosa, Japan (pre- fecture).....	Apr. 12-26.....	289 "	

Change of Address.—Dr. Charles E. Nammack, from June 1st to October 1st, to Edgemere Crest, Far Rockaway, Long Island, N. Y.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending June 9, 1899:*

CRAWFORD, C. A., Assistant Surgeon. Detached from the *Peoria*, when put out of commission, and ordered to the *Wabash*.

FITTS, H. B., Surgeon. Detached from the naval hospital, Portsmouth, N. H., and ordered to the marine barracks, Sitka, Alaska.

DE VALIN, C. M., Passed Assistant Surgeon. Ordered to the naval hospital, Portsmouth, N. H.

DECKER, C. J., Surgeon. Promoted to surgeon from December 12, 1898.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Twenty-one Days ending June 8, 1899:*

BAILLIACHE, PRESTON H., Surgeon. Detailed to represent the service at the meeting of the American Medical Association, Columbus, Ohio, June 6 to 9, 1899.

BANKS, C. E., Surgeon. To proceed to New York for special temporary duty.

WEITENBRACK, C. P., Passed Assistant Surgeon. To proceed to Savannah, Georgia, for special temporary duty.

TABB, S. R., Assistant Surgeon. To proceed to Wilmington, North Carolina, for special temporary duty.

ANDERSON, J. F., Assistant Surgeon. Department letter of April 29, 1899, granting Assistant Surgeon Anderson thirty days' extension of sick leave from May 1st amended, so that said extension shall be for fourteen days from May 1 to May 22, 1899.

CORRIE, G. M., Assistant Surgeon. To report at Washington, D. C., for special temporary duty.

GAUS, HERBY, Hospital Steward and Chemist. To proceed to New York for special temporary duty.

SCOTT, E. B., Hospital Steward. To proceed to Wilmington, North Carolina, for special temporary duty.

MURRAY, R. D., Surgeon. Leave of absence granted by Bureau letter of May 11, 1899, temporarily suspended, and directed to proceed to New Orleans, Louisiana, for special temporary duty.

- CARTER, H. R., Surgeon. To rejoin station at New Orleans, Louisiana.
- CUMMING, H. S., Assistant Surgeon. Leave of absence for twenty-seven days granted by bureau letter of May 18, 1899, revoked from June 1, 1899.
- VON EZDORF, R. H., Assistant Surgeon. To rejoin station at New Orleans, Louisiana.
- FRICKS, L. D., Assistant Surgeon. Upon being relieved from temporary duty at Savannah, Georgia, to report to commanding officer, South Atlantic Quarantine Station, for duty and assignment to quarters.
- HUNTER, S. B., Acting Assistant Surgeon. Granted leave of absence for three days from June 7, 1899.
- WASDIN, EUGENE, Surgeon. To proceed to Washington, D. C., to render report as member of a commission detailed by the President for the scientific investigation of the cause of yellow fever.
- GEDDINGS, H. D., Passed Assistant Surgeon. To proceed to Washington, D. C., to render report as member of a commission detailed by the President for the scientific investigation of the cause of yellow fever.
- CORPUT, G. M., Assistant Surgeon. To proceed to Macon, Georgia, for special temporary duty.
- GAHN, HENRY, Hospital Steward and Chemist. To proceed to New York for special temporary duty.
- NEWBERN, WALTER, Hospital Steward. To proceed to the Tortugas Quarantine Station and report to medical officer in temporary charge, for duty and assignment to quarters.

Appointments.

- MOORE, DUNLOP, of Pennsylvania, and STANSFIELD, HALSTEAD A., of California, commissioned as assistant surgeons.
- BALLARD, JAMES C., of Mississippi, to be acting assistant surgeon, United States Marine-Hospital Service, for duty at Natchez, Mississippi.
- SLAUGHTER, A. W., of Wisconsin, to be Acting Assistant Surgeon, United States Marine-Hospital Service, for duty at Green Bay, Wisconsin.

Promotions.

- MCINTOSH, W. P., Passed Assistant Surgeon, commissioned as surgeon.
- THOMAS, R., Assistant Surgeon, commissioned as passed assistant surgeon.
- WICKES, H. W., Assistant Surgeon, commissioned as passed assistant surgeon.
- CUMMING, H. S., Assistant Surgeon, commissioned as passed assistant surgeon.

Obituaries.

LAWSON TAIT, F. R. C. S.

THE death is announced from England of Mr. Lawson Tait, F. R. C. S. Mr. Tait had a world-wide reputation as an abdominal surgeon of phenomenal capacity, and was, in fact, a most prominent pioneer of abdominal surgery. He was one of the earliest to discard all clamps and instrumental methods of dealing with the ovarian pedicle, and by adopting the method of ligating it and returning it to the abdominal cavity quickly reduced the average mortality of ovarian operations

below that attained by his colleagues in spite of his refusal to operate by Listerian methods. Mr. Tait may be said to have been really the pioneer of aseptic as distinguished from antiseptic surgery, his great motto being "Cleanliness, cleanliness, cleanliness."

Mr. Tait was born in Edinburgh in 1845, and was therefore in his fifty-fifth year. His early introduction to gynecological practice came through his association with Keith, of Edinburgh. He achieved a work which is not easily accomplished in England—namely, that of creating a world-wide reputation as a provincial surgeon, which attracted to the provincial city of Birmingham probably a larger *clientele* than was attracted by any metropolitan surgeon to London. He was a man of the most marked personality and strong individual characteristics, which caused him often to come to "loggerheads" with many of the chiefs of the profession, and created much animosity against him. But if his opponents were bitter, his friends were equally devotedly attached to him, and throughout the world at the present day are many brilliant leaders of abdominal surgery who are proud to call him master. He took a very active part in local politics in the city with which he was identified up to the time of his death. The list of Mr. Tait's professional honors is extensive. He qualified as a licentiate of the Royal College of Surgeons of Edinburgh in 1866, and became in turn M. R. C. S. Eng., F. R. C. S. Edin., F. R. C. S. Eng., M. D. (Hon.), New York, and M. D. (Hon.), Albany. He was a fellow of many English medical societies, a member of many American ones, and a foreign member of the Obstetrical Society of Berlin. For many years he was surgeon to the Birmingham and Midland Hospital for Women and professor of gynecology at Queen's College, Birmingham. His contributions to surgical literature were varied, extensive, and of great value. His loss will leave a wide gap in the surgical world, and he will be deeply mourned by his many personal friends, of whom the United States contains a large number.

Letters to the Editor.

GELSEMIUM IN THE TREATMENT OF INFLUENZA.

GRAND RAPIDS, MICH., May 30, 1899.

To the Editor of the *New York Medical Journal*:

SIR: Concerning the use of gelsemium in grippé, it may be of interest to add my testimony. During the recent epidemic I used it in nearly every case to which I was called early, and so uniformly favorable were my results that I was almost tempted to consider it a specific.

In no case in which its use was begun early did pneumonic symptoms develop. In several cases of sudden and severe onset, characterized by severe chill, suddenly high temperature, and the physical signs of the first stages of pneumonia, with the characteristic rusty sputum, all symptoms disappeared within thirty-six or forty-eight hours after treatment with gelsemium was instituted. I place great confidence in it.

My method is to give (to adults) one and a half or two drops of the fluid extract every half hour till the symptoms indicate that the full physiological effect is produced. It is not necessary to poison your patient.

EUGENE BOISE, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL.B.

XXIII.

RECOVERY OF COMPENSATION.

(Continued from page 828.)

Collections from Estates of Decedents.—There now remains to be considered before closing this chapter the manner of presenting and proving claims for physicians' fees against estates of deceased persons, together with a general survey of the law regulating the subject.

The administration of estates is governed in each State by statutes which are more or less peculiar to the particular jurisdiction. It will therefore be impossible in a limited space to give more than a very general view of the manner of administration, but the proving of claims, when contested, in which the doctor is most deeply interested, is governed by pretty much the same law in all jurisdictions, and will therefore be examined more particularly.

The first step in the administration of the estate of a deceased patient or debtor in which the doctor is interested is that at which the time arrives for presenting his claim for payment. Of the arrival of this time he is usually given notice, either actual or constructive. In the presenting of such claims the doctor should always be prompt, remembering that unless the claim is presented within the period fixed by the law of his State it is totally barred—at least, such is the law of many States—and that, should the law of his State, being more indulgent, allow him to present his claim after the first period fixed has expired, he will be entitled to his proportion of only those assets which remain after the payment of the claims filed and allowed at the proper time. The time fixed for the presentation of claims refers as well to those not due as to those which have already accrued. In some jurisdictions future debts of the estate are paid at their present value at the same time as the other debts; in others, arrangements are made for paying them at maturity.

Claim, by whom Presented.—The claim against a decedent's estate must be filed or presented by the person who owns it or has an interest in it, with the right of enforcing its collection,* or by his lawfully authorized agent.†

Claim, to whom Presented.—The presentation, to be beyond question, must be made to a legally qualified administrator or executor, although a presentation to an executor before his qualification has been held valid. A presentation to an administrator after his discharge is, however, of no effect.‡ When there are two or more executors or administrators of an estate, a presentation to one of them is sufficient. §

Presentation of Claim.—The sufficiency of the presentation of a particular claim is a question that can be

decided in the light of the statutes existing in that jurisdiction, and the preparation of a claim for presentation should never be undertaken without first consulting the statutes of the State in which it is to be filed. In some States the claim is not required to be presented in writing, although this is probably the exception. No harm can result from doing more than the law requires in matters of this kind, and the claim should therefore always be carefully prepared in writing, describing the general nature,* amount, and value of the services with as much particularity as possible. If a note or other instrument has been given, and the claim is filed upon such instrument, then a copy of it should be attached to the claim.

Claims for medical services should always be verified by affidavit of the claimant or doctor, sworn to before some officer having authority to administer oaths.

The affiant should in his affidavit of verification set up the facts that he is a physician and surgeon, and has been duly licensed or is duly qualified under the law of the particular State to practise medicine and surgery; that the annexed account against the estate of decedent, amounting to the sum of — dollars, is just, after allowing all just credits, deductions, and set-offs, and is now due and unpaid. An affidavit setting up these facts in proper form will comply with the law of nearly every State, but before making an affidavit the local statutes should be examined and their requirements carefully followed.

After a claim has been duly presented the executor or administrator will in most States examine the same, and, if he is satisfied that it is a just and proper claim against the estate, either in full or in part, he will allow the same, either at its face or *pro tanto*, accordingly as he is convinced of its merits.

Should the claim be rejected, either in full or in part, the claimant is required, within a short period of time, usually ranging from three months to one year, to bring an action against the executor or administrator to recover the claim or the part of the same which is disallowed; otherwise his rights in the premises will be barred.

Advisability of Prosecuting Claim.—At this point it becomes advisable to consider the condition of the decedent's estate and determine whether or not there are sufficient assets to pay the claim when proved, or whether the reward will be so small as not to justify the fight. Should the estate be solvent, it then is necessary to carefully scrutinize the claim and determine whether or not it is legally valid, and if valid, whether it can be proved.

Solvency of Estate.—In considering the solvency of the estate it is necessary to examine the order of the payment of debts, for the estate may be solvent as to a certain class of debts and pay them in full, while those of a subsequent class would be payable but a small percentage of their face value, or payers nothing at all. At common law the debts of a decedent were paid in the following order: 1. The necessary funeral expenses. 2. The necessary expenses of administration. 3. Debts of record due to the crown. 4. Debts of record due to the subjects, which included mortgages, decrees, statutes, and recognitions. 5. Debts of record not founded upon a valuable consideration. 6. Simple contract

* McDowell vs. Jones, 58 Ala., 75.

† Marshall vs. Perkins, 79 Me., 341.

‡ Branch Bank vs. Hallett, 42 Ala., 671.

§ Gibson vs. Mitchell, 16 Fla., 519.

‡ Dean vs. Duffield, 8 Tex., 235.

* The description of the nature of the service rendered should not be so specific, when filed in the State, holding professional communications privileged, as to violate the law.

† Debts by specialty are those arising out of a contract or other instrument under seal.

debts* based upon valuable consideration. 7. Voluntary bonds or covenants. 8. Other voluntary debts.

Under this scheme the physician's bill would rank in the sixth class, unless he had been so fortunate as to secure a bond in liquidation of it, when it would be advanced to the fifth class, or had reduced it to judgment during decedent's lifetime, in which case he would enjoy the advantage of belonging to the fourth class. In paying these debts, if the estate is solvent, all the creditors are paid in full; but if there is a deficiency in the estate, all the creditors of each class are paid in full in the order of their class until the estate is exhausted, those coming in the subsequent class or classes getting nothing, or perhaps only a *pro rata* share of their indebtedness. To illustrate, under the above scheme, an estate having only enough money to pay the first five classes of creditors would pay them in full. Should there, however, be a sum left after paying the first five classes, but not equal to the total sum of the debts owing under the sixth class, this amount would then be divided among the sixth class of creditors in proportion to the amount of their claims.

The common law order of creditors has been altered in every State, the preference of debts growing out of specialty contracts over those arising from simple contracts being nearly always withdrawn; in some States, however, judgments obtained in the lifetime of deceased are given the preference.

The most common order now existing in the United States is the following: 1. Funeral expenses. 2. Expenses of administration. 3. Expenses of last illness. 4. Judgments (abolished in a number of States). 5. Public debts. This order in many States ranks after the funeral expenses and expenses of administration. 6. Simple contract liabilities.

Probably the most striking change, as shown by comparison of the order existing at common law and the one above given, is the addition of the class "expenses of last illness." This class is quite generally recognized in the United States, but it is not universally accepted.

What is Included in Expenses of Last Illness.—Generally speaking, this includes the necessary medical attendance and nurse hire incurred during the last sickness. What the term "last illness" means is a question that is not entirely free from doubt. We have an early case from the supreme court of Louisiana in which, by reason of the peculiar statute defining the term "last sickness," a hardship is worked upon the physician. In that case the patient was afflicted with a fatal disease, of which the physician would have been unable to cure him, but the immediate cause of the patient's death was a pistol wound. The physician would have been entitled to a privileged claim for attending the patient during that which, in fact, was his last sickness; but the code specified that "the last sickness is considered to be that of which the debtor died,"† thus defeating the claimant's preference.

An early case comes to us from South Carolina in which a preference was asked for nursing during the decedent's "last sickness." The period of such services extended through the last year of the decedent's life, during which time he was lingering under the disease which finally terminated his existence. The refined and humane sentiment expressed by the court of appeals in giving their interpretation of this act demands a quotation

of the opinion: "The issue made up presented the question, and the jury have decided that the services were rendered during the last sickness.

"The court can lay down no rule or limitation for the duration of the last sickness of a man, nor for the degree of attention to be paid him. A wounded man may linger a long time in a helpless state, and chronic diseases and some cancers run through more time than a year. The act concurs with the principles of Christian civilization, and is remedial of a common want and necessity—attention and services during last sickness. We must therefore construe it liberally, and let it inure to its proper end, the full relief of the sick and the infirm. The court and the jury were the proper judges in the particular instance; and they appear to have assessed the amount of the plaintiff's account with justice and discretion."*

In the matter of Reese's estate the evidence showed that Mr. Reese received an injury from a fall; he was attended by the claimant for some time, and so far recovered as to be able to attend to his ordinary business, and the claimant's services were dispensed with. Afterward he had a relapse and called in another physician. Soon after that he died, probably from the effect of the fall, from which he never entirely recovered. The question arose whether claimant's bill was entitled to precedence as "medical attention giving during the last illness." The court thought that the clause refers to proximate and not remote causes of death, and that the attendance must be during the last sickness, but could not be rendered at intermittent periods.

In the case of Huse *vs.* Brown, *exr.*, the services were rendered by the claimant between January 19th and June 28th. The decedent was suffering from a cancer in his nose, from which he died in December following. The trial court instructed the jury that if they should decide the testator died of the cancer under which he was laboring when the plaintiff attended upon him, and that it was a continuing complaint or disorder until his death, they might consider it his last sickness. The supreme court, in referring to this instruction, said: "And why not, whether any such instruction had been given to them or not? It would seem to a plain understanding to be an indisputable fact that the sickness which is terminated by the death of a patient is his last sickness. . . . Sickness assumes so many forms, and death approaches in so many different ways, that we know not how to lay down any legal principle in such cases that can be applied by way of construction of the words 'last sickness.' What is to be considered a man's last sickness seems to be a question properly determinable by the jury upon the facts in each case, and which can seldom, if ever, be the same in two instances. There may probably be in a multitude of cases a strong resemblance. On a trial for homicide it is always a question for the jury whether the deceased died a natural death or in consequence of the act of the person accused. So it may be a question whether the sickness of which a person dies is the same under which he labored when confined and receiving medical aid one or two months before. In the case before us, the questions as to the cause of the testator's death and the continuance of his sickness have been settled by the jury whose business it was to settle it."†

In addition to the above opinion no comment is ne-

* Simple contracts include all not under seal, whether oral or written.

† Succession of Whittaker, 7 Rob. (La.), 91.

* Percival *adur.* *ads.* McVay. Dudley (S. C.), 337.

† Huse *vs.* Brown, *exr.*, 8 Me., 167.

cessary. Should the estate be insolvent, and the services of such a character as to be urged as a preferred claim, or should the estate be solvent, then the next question to be considered is the validity of the rejected claim.

Validity of Claim against Estate.—Generally speaking, the same questions may arise to defeat the collection of a claim against the estate of a deceased person as those which are invoked by a living defendant for the same purpose, and which have been considered in the preceding chapters. For instance, it has been observed that the husband is liable for the medical treatment of his wife; for that reason a claim for services rendered to a deceased wife should be presented to the husband for payment, and not filed against her estate unless the husband has no property with which to pay the claim.*

There are, however, a few questions which, from the nature of the case, can only arise in the class of cases now under consideration.

Where services are rendered a decedent under the expectation and mutual understanding that compensation will be made for the same by way of legacy, or otherwise, but with no special agreement to that effect, the person rendering such services may, upon the failure of decedent to provide for such legacy, collect the reasonable value of his services from the estate.† But where the services are performed in the mere expectation or hope of a legacy, without the intention of making any charge therefor, no claim can be maintained against the estate, even though the claimant's hope of a legacy is not realized.‡

In case of claims of the sort rendered for members of the claimant's family there is a presumption that the services were intended to be gratuitous; this presumption, however, may be rebutted by proof of an express contract to pay therefor, or by evidence of facts or circumstances showing that when the services were rendered the parties contemplated a pecuniary compensation. The strength of this presumption is dependent upon the degree of relationship becoming weaker as the relationship is more distant.

Without dwelling further upon the character of the claim, which is regulated by the same law as that regulating claims between ordinary litigants, we will pass to the mode of proving these claims against estates of decedents, which presents new difficulties.

Proving Contested Claims against Estates of Decedents.—The manner of proving ordinary contested claims has been carefully examined in the last article, together with the amount and character of proof necessary to satisfactorily show the indebtedness. These same rules and precedents may all be considered as regulating the proof of a claim against the estate of a deceased debtor, with the single and important exception that in ordinary claims the physician himself is a competent witness to testify regarding the transactions out of which the indebtedness arose; while in a claim of this sort his lips are sealed and he can only prove his case by submitting his books of account and by producing such other competent witnesses as may have knowledge calculated to corroborate the account.

The reason for this condition is the following: At common law no interested party to a suit was a compe-

tent witness to testify in his own behalf. While the older law works laud the good sense and sound policy of this rule, it does not seem to have proved satisfactory in this country, for it has been abrogated by the legislature of every State, so as to permit the parties to a suit to freely tell all they know of the transactions or conditions out of which the litigation grows, the policy now being to consider the party's interest as affecting the credibility of his statements rather than disqualifying him from making such statements. It is obvious, however, that whenever a suit grows out of a transaction one of the parties to which is dead or insane, the grossest injustice might be done by permitting the other party to testify regarding the nature of such transaction, or to relate any conversation or communication which took place between them relative thereto. For this reason the modern lawmakers, in sweeping away the ancient rule disqualifying the parties as witnesses, have gone only so far as to permit them to testify where they are both living and mentally capable; but where the lips of one party are sealed by death or insanity they allow the law to stand as before, closing the mouth of the other.

This disability, together with the one imposed upon the physician by the law relating to privileged communications, is peculiarly serious to him. If the books of account disclose the nature of the patient's affliction or the character of the treatment prescribed, then they are objectionable in those States having statutes protecting privileged communications; if, on the other hand, the books contain no such information, or if such information is recorded in characters unintelligible to others than the physician, then they are subject to the criticism of being too indefinite to prove the account, and must be supported by strong corroborating evidence. Moreover, it is a matter of very grave doubt whether or not the physician may even prove his books of account and have them accepted in evidence in a suit against the estate of a deceased or insane person. In New York there are two distinct lines of conflicting decisions, one holding that the physician's books are admissible in evidence in a case of this sort,* and the other holding that the books can not be received in evidence.† There is probably no subject in the law upon which the decisions are more conflicting and the rights of the respective parties more uncertain and vague, nor in which the opportunities offer themselves for the lawyer to more fully exercise his knowledge, skill, and judgment in behalf of the interests of his client.

Is Physician's Wife Competent to Prove such Claims?—The person who is most commonly possessed of information necessary to corroborate such claims is the physician's wife, but whether or not she is a competent witness to prove the facts within her knowledge is a very nice question. At common law the wife could not testify for or against her husband in a suit to which he was a party. This rule has been altered in many States, but not in all. In those States in which the rule has not been altered the wife unquestionably has no right to testify. In those States in which the disability has been removed, and the wife permitted to testify with her husband, the question arises, in cases of this sort, whether her interest in her husband's suit

* *In re Wering's estate*, 100 Cal., 345, 31 Pac., 825.

† *Starkey's Appeal*, 61 Conn., 199, *Harrison vs. Lindley*, 194 Ill., 245, *Martin vs. Wright*, 13 Wend (N. Y.), 160.

‡ *Clark vs. Todd*, 16 N. Y. Supp., 191.

* *Young vs. Face*, 21 N. Y. Supp., 225, *Clark vs. Smith*, 16 Harl., 30, *West vs. Van Tassel*, 119 N. Y., 60, *Wetmore vs. Peck*, 19 Alb. J., 100.

† *Ross vs. Ross*, 6 Hun, 182, *Davis vs. Seaman*, 61 Hun, 572.

against the estate of the decedent is such as to render her with her husband an interested party, and therefore an incompetent witness, or whether she shall be considered as having no interest, and accordingly permitted to testify.

The reasons given by the courts at common law for denying to the wife the privilege of testifying in a suit to which the husband was a party were, first, that it was against public policy, such an act being thought a menace to the harmony of the domestic circle and a violation of the confidence subsisting between husband and wife; second, because of the identity of their legal rights and interests. If this second reason is considered applicable to-day, there can be no alternative but to deny the wife the privilege of giving evidence in behalf of her husband's claim; but as the marked tendency of legislation during the past half century has been toward establishing a severalty of legal rights and interest, it is not surprising that some of our courts should consider the second reason so greatly weakened as to regard the wife no party to such a suit, and not legally interested in the result, and therefore accept her evidence in support of the claim. This is a question, however, upon which the courts are unfortunately divided, and in those States where a decision has not been rendered by the court of last resort the question must be considered as still open.

In cases of this sort the testimony of the wife has been held competent in the following States: Maryland,* Mississippi,† New Hampshire,‡ and New York.* It is probable that the rule would be held the same in Nebraska.¶

On the other hand, such testimony has been held incompetent, and rejected by the courts of last resort in the following States: Illinois,‡ Indiana,§ Iowa,¶ Maine,§ Pennsylvania,‡ and West Virginia.**

The claimant, upon producing satisfactory proof of the legality and justness of his claim, is entitled to a judgment for the amount he has shown to be due to him, which judgment the executor or administrator must pay in due time, either in full or in part, as the assets of the estate may justify.

Pith of Current Literature.

Cerebro-spinal Meningitis confounded with Eclampsia.—E. Müller (*Hospitalsblende*, March 22, 1899, p. 295; *Scottish Medical and Surgical Journal*, June) records the case of a thirty-four-year-old woman in a

state of profound coma, who was admitted to Professor Horwitz's clinic in the eighth month of her second pregnancy. Two days previously she had felt out of sorts and next day had a few shiverings. On the morning of admission she was found unconscious on the floor and had several convulsions. On admission she was not in labor; there was no edema; lungs and heart were normal; the pulse was 100, tense and forcible, and the temperature 99.3° F. She got morphine for restlessness, and slept quietly. In the morning she had a typical convulsion. Catheterization gave eight hundred grammes of urine showing the albumin reaction moderately and containing a few granular casts. Temperature in morning 101° F., rose suddenly to 104° F., with the pulse quick and tense; five hundred grammes of blood were drawn, but, as the condition was unsatisfactory, she was delivered by Cæsarean section (fundal incision) and afterward received an injection of five hundred grammes of saline solution. The pulse, however, grew weaker and she died. On autopsy the heart was found to be natural, the lungs congested and cedematous. The kidneys showed parenchymatous and fatty degeneration; the spleen was not large. The brain had gelatinous yellow pus along the vessels in the sulci, and the vessels were congested. There was no fluid in the ventricles. A bean-shaped diplococcus was found and cultivated from the pus. A possibility of meningitis had been glanced at, owing to the existence of an epidemic at the time.

The Significance of Oxaluria.—Dr. Robert F. Williams (*Maryland Medical Journal*, May 20th), from a lengthy consideration of the subject, draws the following conclusions:

1. Whereas the appearance of oxalates in the urine—excluding their ingestion in foods—is due to a derangement of digestion or metabolism, this derangement probably has its cause in many cases in functional nervous irregularity, which may or may not be so great as to produce general nervous symptoms, and if these are present they are not necessarily caused by the oxalates.

2. The condition causing the appearance of oxalates in the urine may produce symptoms closely simulating the constitutional symptoms of Bright's disease.

3. The excretion of oxalates by the kidney for a short while may occasion no local disturbance of that organ, but if continued may, by irritation, cause the appearance of albumin and casts with lessened urine, corresponding to the urinary symptoms of Bright's disease, and if unchecked may lead to permanent destruction of kidney tissue and true Bright's disease.

4. In all suspicious cases, in which the nephritic symptoms are accompanied by the appearance of oxalates in quantity, diagnosis should be held in abeyance and the oxaluria overcome by appropriate remedies to exclude this as a possible cause of the symptoms before making a positive diagnosis and pronouncing a necessarily hope-dispelling prognosis.

Poisonous Properties of Orthoform.—The *Indian Medical Record* for May 3d says that it published in its issue for April 12th an article by Dr. W. Asam showing that orthoform was capable under certain circumstances of giving rise to symptoms of general poisoning.

Similar effects have been observed in the clinics of Albertin, Pollosson, and Rollet, of the Lyons Hospital.

In the case of a woman under the care of M. Al-

* *Trahan vs. Colburn*, 63 Md., 39.

† *Roshing vs. Roshing*, *adur.*, 52 Miss., 339.

‡ *Clements vs. Marston*, 52 N. H., 31.

§ *Whitman vs. Foley*, 125 N. Y., 651; *Porter vs. Dunn*, 121 N. Y.,

314.

¶ *Wylie vs. Charlton* (Neb.), 62 N. W. Rep., 220.

‡ *Belont vs. Lestudé*, 153 Ill., 625.

§ *Schever vs. Ingeman*, 110 Ind., 128. This case simply declares the wife incompetent because the statute provides that she shall be in such cases.

¶ *Muir vs. Miller*, 82 Iowa, 700. Code excludes such evidence.

‡ *Berry vs. Stevens*, 69 Me., 290.

§ *Sutherland vs. Ross*, 110 Pa., 379.

** *Kilgore vs. Handey*, 27 W. Va., 451.

bertin, where an external wound existed after abdominal hysterectomy, orthoform was by a mistake used instead of xeroform. The patient was soon afterward attacked with headache, fever, nausea, and vomiting, while on the face and other parts of the body patches of erythema of a dusky red color appeared. The wound was carefully washed, and all the bad symptoms disappeared in three days. Similar symptoms were noticed in a patient operated on by M. Pollosson for a canceroid of the nose, and in two cases of burns dressed with orthoform (Rollet).

From this, the *Record* says, it appears that, when applied to extensive surfaces, orthoform becomes dissolved in the alkaline products of secretion, and may produce poisonous effects which, though not dangerous, are unpleasant. Consequently orthoform should be employed in small quantities only, and with caution.

New Operation for Inversion of the Uterus.—Westermarck (*Centralblatt für Gynäkologie*, 1899, No. 1; *American Journal of the Medical Sciences*, June) opened the posterior fornix, inserted one finger into the ring from above, and, while steadying the uterus in this way, incised the posterior wall. By compressing the anterior wall with the thumb while the edges of the wound were pressed forward, the inversion was easily reduced. The uterus was then brought through the vaginal opening, and the wound sutured with catgut, after which the organ was replaced within the peritoneal cavity and the wound in the posterior cavity and the posterior fornix sutured. The patient made a good recovery.

A Cause of Crying in the Newly Born.—Dr. Thomas S. Southworth (*Archives of Pediatrics*, March) records the case of a newly born child in which incessant crying was found to be associated with priapism. The placing of a cool hand over the bladder was found to be associated with discharge of turbid brown urine. The child was ordered boiled water sweetened with cane sugar every two hours. The author says: It is extremely probable that much of the supposed pain of colic in the newborn for which they have, from time immemorial, been dosed with fennel and other aromatic teas, is due to these sources of irritation in the kidney, ureters, bladder, or urethra. Boiled water, which should be given to every infant at regular intervals, for more reasons than one, pending the establishment of lactation, will dilute the urine and prevent or alleviate the discomfort. The rather unusual opportunity afforded the writer of observing matters in this case, together with the subsequent course of events, point clearly to the urine as the cause of the crying, whereas, had no such observation been made, hunger and miction might readily have been considered a sufficient explanation of the symptoms.

The Treatment of Pulmonary Tuberculosis by Subcutaneous Injections of Camphorated Oil.—Dr. Bruno Alexander (*Gazette hebdomadaire de médecine et de chirurgie, Revue médicale*, May 24th) says that camphor influences all the symptoms of pulmonary tuberculosis and is thus one of the best agents in its hygienic treatment, inducing in about eight days the quieting of nervous troubles, headache, and insomnia. It continued longer, the congestive symptoms of the lungs disappear. In patients with fever Dr. Alexander injects daily *sub cut* from fifteen to thirty one hundredths of a grain of camphor, or one or two Pravaz syringeful of cam-

phorated oil, continuing the treatment for from four to six weeks without interruption, at the end of which time he ceases for from one to four weeks, resuming treatment later. When the fever has disappeared he raises the dose to from forty-five to seventy-five hundredths of a grain during one or two weeks without interruption. This treatment is said to be always well supported, and even hæmoptysis is not a contraindication. The author compares the value of camphor in lung diseases to that of digitalis in heart affections.

Central Pneumonia discovered by the Radioscope.—

G. Variot and G. Chicotot (*Journal de clinique et de thérapeutique infantile*, vol. vii, p. 151, March 9th; *British Medical Journal*, May 13th) describe the case of a girl, aged nine years and six months, who had been ill for five days, who had slight pain at the base of the thorax, loss of appetite, cough, furred tongue, and some diarrhoea. There was an evening temperature of 103.2° F. Percussion and auscultation practised with great care gave negative results on both sides of the chest. The presence of labial herpes, however, and the temperature, suggested central pneumonia, especially as the respiration was not specially quickened. The next day the temperature fell to 100.4° F., and the next day to 98.6° F. Then the use of the Chabot-Villar tube was called in to aid the diagnosis by radioscope. It was seen quite clearly that in the middle of the right lung was a zone of opacity about the size of a five-franc piece. This was doubtless a pneumonic patch in process of regression.

Treatment of Keloid by Injections of Creosote in

Oil.—Balzer and Mousseaux (*Annales de dermatologie et de syphiligraphie*, 1898, No. 12; *American Journal of the Medical Sciences*, June) report a case of keloid of the lobule of the ear, following the removal of a small tumor, successfully treated by injections of a twenty-per-cent. solution of creosote in olive oil. At each *séance* about one cubic centimetre was injected into different parts of the keloidal tumors, of which there were two. These injections were followed by very little pain, but a few days after the first one a portion of the keloidal tissue sloughed out, leaving a deep ulcer, which soon cicatrized. At the time of making the report the smaller of the two tumors had entirely disappeared and the larger was considerably reduced in size.

Book Notices.

Gout: Its Pathology and Treatment.—Founded on the Goulstonian Lectures on The Chemistry and Pathology of Gout, delivered by the Author before the Royal College of Physicians of London in 1897; with the Addition of Some Recent Investigations concerning the Treatment of Gout, and a Detailed Account of the Treatment of the Various Forms of Gout. By ARTHUR P. FULTON, M.D. (Lond.), B.Sc., F.R.C.P., Physician in Charge of Out-patients and Lecturer on Forensic Medicine at St. Mary's Hospital, New York. W. B. Saunders & Co., 1899. Pp. viii + 248.

With the introduction of this work it is probable that many of our colleagues are familiar, for it is practically a reproduction of the Goulstonian Lec-

tures for 1897 on The Chemistry and Pathology of Gout. The opinion they have formed of them must necessarily have been favorable, we think, and the pages that have been added to make the work complete and as it now appears in book form are not likely to cause them disappointment.

In the second part of the book we are given an excellent presentation of the causation, the forms, the diagnosis, and the prognosis of gouty disorders. It is not unconventional. Part III, however, is unusual, and, since it represents the result of investigations conducted by a competent observer, it is valuable in no ordinary degree, however surprising it may be in many respects. The pages describe "a series of investigations undertaken with the objects of ascertaining the various conditions affecting the formation and removal of gouty deposits, the influence of alcoholic drinks on the gouty process, the solvent effect of the mineral constituents of various vegetables on gouty deposits, and the value of certain drugs in effecting the removal of such deposits." The author's conclusions in connection with these matters are of sufficient importance to be quoted at length.

"1. The alkalinity of the blood is apparently not appreciably diminished during a gouty attack.

"2. The solubility of uric acid in the blood is not affected by a diminished alkalinity of the blood produced by the addition of organic acids.

"3. The deposition of sodium biurate is not accelerated by a diminution of the alkalinity of the blood.

"4. An increased alkalinity of the blood does not increase the solubility of deposits of sodium biurate.

"5. The gout-inducing properties of certain wines are not due to their acidity. Probably they owe their gout-inducing action to the effect they exercise on the metabolism of the liver.

"6. The solubility of sodium biurate is markedly increased by the presence of the mineral constituents of most vegetables.

"7. The solubility of sodium biurate is diminished by the presence of the mineral constituents of meat.

"8. The mineral constituents of certain vegetables delay the conversion of sodium quadriurate into the biurate.

"9. The vegetables most useful to gouty subjects are spinach, Brussels sprouts, French beans, winter cabbage, Savoy cabbage, turnip tops, turnips, and celery.

"10. The administration of the ordinary alkalies, of lithium salts, of piperazine, and of lysidine, with the object of removing gouty deposits, appears to be useless.

"11. No general acidity of the system is associated with gout.

"12. No relationship exists between the acidity of the urine and the alkalinity of the blood.

"13. The administration of salicylates with the object of removing gouty deposits appears to be useless, and their employment in the treatment of gout is contraindicated.

Part IV, which describes the treatment of gouty disturbances, is delightful because of its common sense and its simplicity. After what has preceded, it is not to be expected that the author should place great dependence upon treatment by drugs, though colchicum is naturally an exception, particularly in the acute form of the disease. One statement, we believe, will seem to one surprise, and that is that "a patient suffering from gout should avoid, as far as possible, the use of common salt at table, owing to the power it pos-

sesses of diminishing the solubility of sodium biurate, and thereby hastening the precipitation of that body."

The volume is most scholarly throughout.

The Anatomy of the Central Nervous System of Man and of Vertebrates in General. By Professor LUDWIG EDINGER, M.D., Frankfurt-on-the-Main. Translated from the Fifth German Edition by WINFIELD S. HALL, Ph.D., M.D., Professor of Physiology in the Northwestern University Medical School, Chicago. Assisted by PHILLO LEON HOLLAND, M.D., Instructor in Clinical Neurology in the Northwestern University Medical School, Chicago, and EDWARD P. CARLTON, B.S., Demonstrator of Histological Neurology in the Northwestern University Medical School, Chicago. Illustrated with Two Hundred and Fifty-eight Engravings. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1899. Pp. xi-446.

It is now fourteen years since the first appearance of Edinger's *Lectures on the Structure of the Central Nervous Organs*. This period has been one of active progress in our knowledge of the architecture of the central nervous system. New techniques in the hands of such men as Ramon y Cajal, Golgi, and Nissl; researches in embryology and comparative anatomy by Retzius, His, Flechsig, and many others, to say nothing of our increased familiarity with form relations obtained through older methods, have, by adding new facts to neurological science, greatly widened the horizon of its philosophy.

Over three hundred years ago Descartes, the father of modern neurology, the man who did not "mirror the actuality of his own age, but who embodied its potentiality and magically reflected the future," foresaw that many of the dark corners of metaphysics were to be redeemed by the searching lights of the natural sciences, and foresaw that of these lights the most penetrating, the most illuminating, was the one which was lit by the study of the nervous system. The credit which must ever belong to the great Frenchman is only enhanced by the length of time elapsing before the fulfillment of his prophecy. The present century was well on its way before the finer structure of the nervous system began to be revealed, and still further advanced before it was possible to harmonize the make-up of the machine with its workings. Now, if one looks only backward, much has been accomplished. The associated results of the labors of anatomists, physiologists, and pathologists, of psychologists and clinicians, together with the facts gleaned from embryology, from biology, and indeed from all the sciences which deal with life, have narrowed the domain of metaphysics and have shown that, as the nervous system is the last link in the material chain, so through a knowledge of it we are to approach most closely to the unknowable.

The history of the book now before us reflects the fruitful activity of its lifetime. Begun as a series of lectures by a practising physician in Frankfurt, it has come through five successive editions until to-day, in enlarged form and with widened scope, it stands as one of the best known of purely scientific medical books. Originally a description of the central nervous system of man intended especially for physicians, it now contains information indispensable to all who occupy themselves with the problems connected with the manipulations of nervous energy. In addition to being a masterly

description of the comparative anatomy and embryology of the nervous system, it is marked throughout by philosophical suggestions and deductions which will be appreciated by all inquirers.

The translators have done their work well. The text reads easily, with remarkably few places where the meaning is not instantly plain.

Essays for Students. By STEPHEN PAGET, F. R. C. S., Surgeon to the West London Hospital, etc. New York: William Wood & Co., 1899. Pp. 7 to 177.

"THESE essays were written for students," says the preface, and indeed they are excellent, lacking as they do that air of finished perfection and the odor of the lamp which hangs about so many so-called clinical lectures; lectures many of which have probably never been delivered. They include four different groups of diseases—namely, strangulated hernia, cancer of the breast, one entitled "Some Run-over Cases," and, lastly, a set of lectures on the practical elements of aural surgery. Specially interesting is the study of the "run-over cases," many of which developed for some unknown reason an excessive and voracious appetite or thirst not in any way dependent on post-traumatic diabetes, but apparently connected in some manner with the injury to the brain which these patients received. The same condition is sometimes seen in cases with brain tumors.

Les Glycosuries non diabétiques. Par GERMAIN ROQUE, Professeur agrégé à la Faculté de médecine, etc. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 92.

UNDER the leadership of the famous Claude Bernard, the French school of medicine has always occupied a leading place among the investigators of the causes and results of the presence of sugar in the urine. Especially has this been true of recent years and on the limited subject of non-diabetic glycosuria. Among those who have devoted their energies to the solution of this problem the author of this small volume is not the least, and he has here given a most excellent and critical review of the whole matter, to which have been added the special points observed by himself. The divisions of the subject are four: Gouty, digestive, nervous, and puerperal glycosuria, with a chapter on treatment. Under the division of digestive or alimentary glycosuria, the habit which some authors have adopted of regarding the easy production of this form of glycosuria as an accurate index of the glycolytic function of the liver is sharply and justly criticised, and the results are shown to be dependent far more on the glycolytic powers of the general body tissues than on any special organ, such as the liver. The treatment of the various forms is well presented and the volume should prove a useful one.

Die neuere Geschichte der Medicin. Kurz dargestellt von O. v. BOLTENSTEIN, in Bremen. Leipzig: C. G. Naumann, 1899. Pp. vii, 398. [*Medizinisch-Bibliothek für praktische Ärzte*, Nr. 112, 113.]

THIS book is a most excellent exposition of one graphical fact, salient in the history of medicine, but, at the same time, it is more than a mere collection of the lives of men whose names have become a tradition. It records what these men did and what they thought, but it also considers the slow acting causes which made the efficiency of their labors possible. It is philosophi-

cal. The accomplishment of this difficult task in so small a volume is no little achievement, and the book bears throughout the marks of extreme research. It can be warmly recommended as a satisfactory, trustworthy, and yet brief treatise upon a subject with which we should do well to make ourselves more familiar.

Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens. Herausgegeben von der Medizinal-Abtheilung des königlich preussischen Kriegsministeriums. Heft 13. Kriegschirurgen und Feldärzte des 17. und 18. Jahrhunderts. Von Professor Dr. ALBERT KOEHLER, Oberstabsarzt I. Cl. Mit 13 Portraits, 5 Abbildungen, und 2 Plänen. Berlin: August Hirschwald, 1899. Pp. x+269.

THIS volume of the publications of the medical division of the Prussian war department is a portion of a series devoted to the history of military surgery and the military surgeons of Prussia and the other German states, and the present volume contains the lives of the military surgeons of the seventeenth and eighteenth centuries. It was a time of great military activity, as it includes the Seven and the Thirty Years' wars, and the crude military surgery of that time made considerable strides, though the means employed in the treatment of wounds seem curious enough now. The work is embellished with a number of portraits and pictures from old books of the time.

Annuaire des eaux minérales, stations climatiques et sanatoria de la France et de l'étranger. Suivi d'une nomenclature des établissements hydrothérapiques. Par le Docteur G. MONTEY, vice-président de la Société d'hydrologie médicale de Paris, etc. Quarante et unième année, 1899. Paris: Librairie Maloine Pp. 5 to 287.

THE appearance of the forty-first edition of this guide is a sufficient evidence of its popularity and usefulness.

Die multiple Fettgewebsnekrose. Klinische und experimentelle Studien. Von Dr. ARTHUR KATZ und Dr. FERDINAND WINKLER, Assistenten an der allgemeinen Poliklinik in Wien. Mit 15 Abbildungen. Mit einem Vorwort von Dr. LEOPOLD OSER. Berlin: S. Karger, 1899. Pp. 139.

THE authors have reviewed the literature and the cases so far published of multiple fat necrosis, and have also carried out a number of experiments on dogs in which injury was done to the pancreas, and fat necrosis thus produced. Their results do not entirely settle this difficult and little-understood branch of pathological anatomy. They are as follows:

Multiple fat necroses occur more often in men than women, and in stout and athletic men especially. They are caused by the action of a sharp instrument which is set free when the pancreas is injured, or a foreign body takes place in its position. In both cases there is a sharp laceration, the blood vessels are torn, circulatory, and there is a freedom of contact with peritoneal fluid. The necrosis of the fat is generally only a moderate reaction to the injury. There is no evidence of a reaction on the part of the pancreas. The diagnosis is established by the following: (1) the symptoms pointing directly to the pancreas, (2) the site of the lesion, the position of the pancreas, (3) the effect of the

obstruction. The only treatment which has been followed by any results is exploratory laparotomy. Its method of action is, however, unknown.

Footnotes to Evolution. A Series of Popular Addresses on the Evolution of Life. By DAVID STARR JORDAN, Ph. D., President of Leland Stanford Junior University. With Supplementary Essays by EDWIN GRANT CONKLIN, Ph. D., Professor of Comparative Embryology in the University of Pennsylvania; FRANK MACE MCFARLAND, Ph. D., Associate Professor of Histology in Leland Stanford Junior University; and JAMES PERRIN SMITH, Ph. D., Professor of Paleontology in Leland Stanford Junior University. New York: D. Appleton and Company, 1898. 1p. xviii-392. [Price, \$1.50.]

THERE have been two voyages in the history of science which are especially memorable: the one by Columbus which practically demonstrated the earth's shape; the other, a far less well known voyage, but one perhaps more far-reaching in its results and of more remarkable value to science, the voyage of the *Beagle*. The voyage of Columbus opened to the Old World new fields for exploration and for material development and the results to pure science have been very great; but the voyage of the little ship *Beagle* was the means of opening a way by which the methods of Nature could be made clear and their laws reduced to a form with simple terms. The man who first did this was Charles Darwin, and his inspiration was received during the voyage of the *Beagle* by observing the strange fact that the land birds of the Galapagos Islands off the coast of South America resemble exactly no other known species, though they mimic very closely in characteristics and habits the land birds of the continent some six hundred miles away. Evidently they have been carried out to these islands on drift timber or blown out by some storm. Why, then, are they different from their ancestors? The answer to this question took Darwin many years of patient observation and quiet thought, but the result was commensurable to the effort, for practically no fact which he recorded and used has been controverted. The answer was Evolution, an idea as old as the Greeks, whose sterile philosophy stopped with the mere dream of the possibility, and it was left to Darwin to wrest from Nature a few slight hints only of the secret of her laws. About this much-misused word has centred a war, chiefly of words. The scientific man is too busy verifying its application to natural life and endeavoring to obtain more accurate glimpses of the meaning of this process to spend much time in debate, but to the lay mind it has been a source of great joy. This type produces marvelous Darwinian religions destined to supplant all others, social evolutions which contain no evolution, so that the name has lost its original significance and is commonly supposed to be a force which carries us somehow upward away from our monkey ancestors. In contrast to this sort of thing a few minds have endeavored to stem the current and to popularize the truth. Among these may be mentioned more especially Huxley, Tyndall, and Spencer in England, and many others in our own country. Foremost among the latter must be placed these essays of Jordan's, which in clearness of form and reasoning leave little to be desired. All but three of the papers in the volume have been written by him as condensations from a series of University Extension lectures. They are social in

their trend, showing the general applications of the principles of evolution to our modern life, as a few of the titles will show—The Evolution of the Mind; Hereditary Inefficiency; The Woman of Evolution and the Woman of Pessimism. Our author touches all these varied subjects with a light hand; they are clear and simple in their presentation, yet scientifically true—a rare combination. Yet they are not mere literature, on the other hand, but sound discussions of scientific problems. The essays contributed by the collaborators are less successful only because their subjects are more purely technical.

Les Régénérations d'organes. Par le Dr. PAUL CARNOT, Docteur ès sciences, etc. Avec 16 figures dans le texte. Paris: J.-B. Baillière et fils, 1899. Pp. 5 to 96. [Price, 1 fr. 50.]

THIS is an excellent little reference monograph on the little-known but important subject of the regeneration of the tissues after injury or disease. The literature of the subject is given in a very complete way.

Diseases of the Ear, Nose, and Throat, and their Accessory Cavities. By SETH SCOTT BISHOP, M. D., D. C. L., LL. D., Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College, etc. Second Edition, thoroughly revised and enlarged. Illustrated with Ninety-four Colored Lithographs and Two Hundred and Sixteen Additional Illustrations. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1898. Pp. xix-3 to 554. [Price, \$1.]

THE fact that the author has been called upon to prepare a second edition within less than two years after the issue of the first shows that his book has filled a want among at least a portion of the readers of this special field of medical literature. Dr. Bishop stated in his first edition that his work was designed not primarily for specialists, but for students, for general practitioners who wished to acquire the proficiency necessary to properly treat those patients who were unable to visit specialists, and for those who were gradually exchanging their general work for special.

This statement designates the point of view from which the book should be judged. Necessarily it can not be compared with more elaborate treatises, for it is not designed to cover the same ground. But for a working volume for frequent consultation, by the special classes for whom it is designed, it is thoroughly up to date, and contains the experience of one who has done a vast amount of clinical work and has been able to deduce therefrom logical conclusions which he has stated in a clear and comprehensive form.

The second edition contains fully twenty-five per cent. more matter than the first. Entirely new chapters have been prepared on two important topics—viz., Related Diseases of the Eye and Nose, and Life Insurance affected by Diseases of the Ear, Nose, and Throat. Moreover, there have been added illustrated articles on Direct Laryngoscopy or Autoscopy, and on Pachydermia Laryngis. Illustrations have been used with a lavish hand and the colored plates are of unusual merit.

We have reason to know that this work has met with a large sale among the physicians of the South and West. Other works similar in scope and written by Eastern men are perhaps better known and more widely read by the profession in the Eastern cities, but Dr.

Bishop has prepared a treatise which any worker in these special fields can read with profit. We are sure that he will do so with interest also.

Clinical Lectures delivered before the Students of the Imperial Moscow University. By G. A. ZACHARIN, M. D., Late Professor (Emeritus) of Clinical Medicine and Director of the Therapeutical Faculty Clinic of the Imperial Moscow University, etc. Translated from the Fifth Russian Edition by ALEXANDER ROVINSKY, M. D., Member of the Massachusetts Medical Society. Boston: Dampell & Upham, 1899. Pp. xvi-187.

THESE lectures, delivered to the students of the Moscow University, certainly afford an excellent example of what real clinical lectures should be. They not only present a case and bring out its salient points, but they go much further in giving to the student clear instruction in the methods of obtaining a complete clinical picture, the value of observing the small details of the surroundings and daily life of the patient, and the method of sifting the whole mass of evidence obtained. An example of the application of this process is seen in the first series of lectures, twelve in number. These are all devoted to the study of a single case, not a very interesting one at first glance, with chronic gastritis, anemia, and oxaluria, all of which can be more or less closely traced to the poor food, bad air, and hard work of the Russian peasant. Yet, while watching the gradual improvement of this one case for a period of three months, the author practically covers the whole subject of the care and hygiene of cases of chronic intestinal trouble, of massage, of drugs, of the modern methods of chemical analysis as applied to gastric conditions, and of the use and abuse of mineral waters. Such a method of instruction involves a great expenditure of time, yet it is certainly better than the present idea of showing five or six cases in an hour, with great effect theatrically, but with a result sadly muddling to the average student brain. We can confidently recommend these lectures to every clinical teacher as extremely suggestive, even though they are not altogether in accord with the current views of the profession.

The Diseases of the Nervous System. A Text-book for Physicians and Students. By Dr. LEONIE HERT, Professor at the University of Breslau. Translated, with permission of the Author, by AUGUST HOCH, M. D., formerly Assistant Physician to the Johns Hopkins Hospital, etc., assisted by FRANK R. SMITH, A. M. (Cambridge, M. D., Instructor in Medicine in the Johns Hopkins University. With an Introduction by WILLIAM OSTER, M. D., F. R. C. P., F. R. S., Professor of Medicine in the Johns Hopkins University, etc. With One Hundred and Eighty-one Illustrations. New York: D. Appleton and Company, 1899. Pp. xvi-715. [Price \$8.00.]

WITH the exception of several new cut and colored alterations in the arrangement and addition to the substance of the text, Dr. Hert's second edition is the same as the first. On its first appearance, in 1890, it at once took a high rank as a text-book of nervous diseases.

Its popularity at home, in England, France, and Italy, but especially in this country, rendered it a notable review in these columns unnecessary. It is now

so well known that the only introduction necessary is the announcement of this second edition.

Die Krankheiten der Mundhöhle, des Rachens und des Kehlkopfes. Mit Einschluss der Untersuchungs- und Behandlungsmethoden. Für praktische Ärzte und Studierende. Von Dr. ALBERT ROSENBERG, in Berlin. Zweite neu durchgesehene und erweiterte Auflage. Mit 180 Abbildungen im Text. Berlin: S. Karger, 1899. Pp. x-2 to 412.

THE second edition of this valuable text-book on the diseases of the mouth, throat, and larynx has been considerably increased in size by the addition of new illustrations and the results of the more recent studies on the subject. It still maintains its position as one of the best books of its sort, being clear, concise, and sound in its statements.

Miscellany.

The Rush Monument Project.—At the recent meeting of the American Medical Association the following communication was submitted:

Mr. President and Members of the American Medical Association: You may remember the enthusiasm which prevailed at the meeting of the association in Philadelphia when the sum of a hundred thousand dollars was fixed by common consent as the amount which should be contributed by the profession to erect a suitable memorial, not alone of the great medical patriot of the Revolution, but of the part which the profession of medicine, represented by him, had had in the foundation of this great republic, and as the expression of the patriotic sentiments and love of country of the medical men of the present day. You must also recollect how the delegates from State after State rose and pledged their several constituencies each for its quota for this commendable project. You may further remember how at the meeting in Denver two States, New York and Colorado, redeemed that pledge, and a third, Pennsylvania, conditionally, and how at my request the permanent secretary was directed to communicate with the officers of the State medical societies, urging them to appoint without delay representative members of the committee from their several States and Territories. I know that he promptly performed this duty. Sixty State medical societies have appointed such representatives. Three hundred and fifty-five dollars and fifty cents have been added to the movement fund, which now by increase of interest upon the money already accumulated amounts to about ten thousand dollars, actually in the treasury of the U. S. A. Washington dispatch reads: "For the monument to Lafayette, a sum of ten thousand and two hundred dollars was today pledged. It was received at the office of the Lafayette Monument Commission from the Ohio State Congress. The sum of \$10,000 contributed by the Ohio Legislature, \$2,000 for the monument to Lafayette, and \$8,000 for the city of Paris in the year 1900. When the figures sent direct from various schools, the total of the second dollars." "One half the fruit of the harvest is to be given a hundred thousand men, and the other half profession in the United States to be given to their own national capital to their government and profes-

sional *confrère*, whose services in the cause of national liberty were every whit as great.

Your business committee at Denver did not approve my request that the association should defray the expense of attendance at the meetings of at least one of the officers of the Rush Monument Committee. As these officers have continued over from year to year, it is evident that the action of the business committee virtually requires them to contribute annually from their private means from fifty to two hundred dollars, according to the distance traveled. In my own instance, by reason of my retirement from active duty in the navy by limitation of age, I am no longer eligible for official detail and should be subjected to an outlay on account of the monument which no other member of the association is asked to make.

Mr. President and Members of the Association—after fifteen years of persistent, earnest effort, the time has come when I must admit that I can do no more. I reminded you at Philadelphia that, of the eleven men originally interested in this project, all but two had died since its inception. In February of this year, the secretary of the committee, Dr. George H. Rohé, of Maryland, my friend of friends, my always enthusiastic colleague and active coadjutor, also died; so, lest death come unaware to me as it did to him, it is advisable that I transfer this duty to some younger and I hope more successful worker. It has been from the first a labor of love for me. From the beginning of my professional life, and this was almost half a century ago, the personality of Rush has been familiar to me through my preceptor, Dr. Rush Van Dyke, whose father, Dr. Frederick A. Van Dyke, a courtly, cultured gentleman of the highest type of the old-time physician, was himself a favored pupil of Benjamin Rush's, whose name he bestowed upon his son, for whom he selected the honorable career which his famous teacher and himself so worthily graced. I would that every physician of this day should appreciate his indebtedness to this great man, who, had he lived among us, would have been no less distinguished—this physician who, great when he lived, is still the greatest physician this country has ever produced—this typical, manly doctor, whose faults were those which belong to every man of his impetuous, earnest, far-seeing, and far-striving nature. To honor him with a monument is to honor our profession—and it must be a monument in keeping with the dignity of this greatest of human vocations—hence I felt you acted wisely at Philadelphia in determining a hundred thousand dollars as the proper sum to be devoted to its erection.

The secretary of the navy has assigned an unequalled site for the structure on the beautiful park fronting the United States Naval Museum of Hygiene, especially appropriate in that Rush was a pioneer in sanitary science, which men like the surgeon Gross and the physician Flint, as they laid down their lives, declared to be the highest aim and crowning glory of the science of medicine.

At the sluggish rate at which this fund has grown in my hands, it would be futile for me to see it reach the proportions I think, with you, it should attain, especially as I shall have left for an indefinite residence abroad when this report is presented. So, thanking you for your repeated expressions of approval of the little I have done and of the much I have sought to do, and cordially wishing success to my successor in office, I hereby resign the trust with which you first honored

me in 1884 and have repeatedly renewed the past fifteen years.

Respectfully submitted,

ALBERT L. GHION, M. D.,
Chairman, Rush Monument Committee.

A New Operation for Hernia.—Dr. Emory Lanphear (*Medical and Surgical Monitor*, May 15th) describes, in a paper read before the Academy of Medical and Surgical Sciences, a new operation devised by him to avoid the atrophy of the testicle which is noted to have occasionally followed Bassini's operation, and the tendency to recurrence which at times follows on the Czerny and Macewen methods. He says:

"A large flap is turned back, exposing the hernial sac and the inguinal canal in their entirety. The sac is then carefully dissected out, opened, and the contents reduced. At this stage the opening into the abdomen is closed with gauze and the spermatic cord and testicle lifted out of their natural position and enveloped in iodoform gauze. From the hernial sac (parietal peritoneum) there is now made a pouch or artificial tunica vaginalis testis, into which the testicle and cord are passed and inclosed with catgut sutures in such a way that not too much pressure is possible upon the cord; the whole is then pushed into the abdominal cavity and anchored by a few catgut sutures. The cut in the peritoneum is next closed; next the opening into the scrotum sutured; then each muscular layer of the abdominal wall carefully sutured, completely obliterating the canal—just as is done in operating for inguinal hernia in the female.

"That the ultimate fate of the buried testicle may be atrophy, the author can not dispute, as no opportunity has yet presented for post-mortem examination; that it is possible he can not deny. From a surgical standpoint, the chief objection to this operation is that a suppurative orchitis, or epididymitis might necessitate abdominal section; but suppurative inflammation of these structures is so comparatively rare that this danger, he thinks, can scarcely outweigh the advantages to be gained. So far, only the most gratifying results have been noted in the three cases thus operated on."

Acute Diffuse Gonococcal Peritonitis.—Dr. Harvey W. Cushing (*Bulletin of the Johns Hopkins Hospital*, May) thus concludes a very interesting paper containing the records of two cases operated upon: 1. The gonococcus is capable of causing a specific infectious disease—namely, gonorrhoea—and at the same time other and less specific pathological conditions. 2. There is experimental proof that in certain small animals the gonococcus can set up acute alterations in the peritoneum homologous with the acute septic serositis in man, but differing from these in their tendency to rapid and spontaneous healing. 3. Hitherto there has been wanting conclusive proof that in the peritonitides attendant upon gonorrhoea occurring in women, the gonococcus was solely or chiefly concerned. The inflammations had been variously regarded as mixed infections and chemical inflammations. 4. The cases reported in this paper bring for the first time convincing evidence of the existence of a diffuse, general inflammation of the abdominal cavity caused by the gonococcus. 5. It has been recognized that extension of the gonorrhoeal infection from the genital organs to the peritoneum may occur in the puerperal state; a similar sequel is shown to be possible during menstruation. 6.

Such ascending forms of gonorrhœa doubtless under ordinary circumstances remain localized in the pelvis, and rarely demand surgical investigation in the acute stage. 7. A general involvement of the peritonæum, such as occurred in the two cases given, must either be rare or unrecognized, and may depend upon some especially receptive condition of the serosa or virulence of the organism. 8. The peritonæum is not more immune than are the pericardium or endocardium to gonococcal infection, and, being more exposed, suffers more commonly in females, although the relatively benign course of the disease makes it a rare condition to come to the attention of the surgeon in the acute stages.

Stypticin in the Treatment of Uterine Hæmorrhage and Dysmenorrhœa.—At a recent meeting of the Munich Society of Gynecology and Obstetrics (*Centralblatt für Gynäkologie*, April 23d) Dr. Nassauer reported his continued experience with stypticin. It does not act upon the muscular structure of the uterus, like ergotine, he says, but upon the vasomotor nerves of the genital tract. It is useful in all uterine hæmorrhages not accompanied by some gross lesion of the uterine mucous membrane, but it is of no use in fungous endometritis until curetting has been employed, or in hæmorrhage after labor or abortion until all remnants of the ovum have been removed. In bleeding due to myoma it is effective only when the mucous membrane is intact, although it strikingly mitigates the pains of the menstrual periods or does away with them altogether. It is efficient against hæmorrhages caused by tumors of the annexa or by inflammation or congestion and against those of chlorosis and phthisis, as well as those of the climacteric. To secure its immediate action, three grains should be injected deep into the gluteal muscles; internally, of Mereh's tablets should be given every two hours, but not more than eight in twenty-four hours. In painful and profuse menstruation, it allays the pain while it moderates the flow.

A Mysterious Epidemic.—According to the *Medical and Surgical Review of Reviews* for May, a mysterious epidemic is reported to have broken out in the Hungarian village of Jas-bratbask, where the whole of the population are suffering from a peculiar disease. Out of five hundred inhabitants it is said that three hundred have already died. The attacks are accompanied by profuse hæmorrhages and violent mania. The origin of the disease has not yet been determined. Medical men sent from Budapest state that the disease is of a type hitherto unknown. A committee of medical experts has been sent from Vienna to make investigations.

American Gift to an English University. From the *British Medical Journal* for May 20th we learn that less than a year ago, at a meeting held in Birmingham, the scheme for a new midland university, to be called the University of Birmingham, was started. Mr. Chamberlain, in his speech, alluded on that occasion, and the promoters aimed at £250,000 as a minimum to endow the university. Such a sum was then thought to be many to be unattainable. But in less than twelve months the sum has been nearly all promised, and the committee now only require about £10,000 to enable the endowment fund a quarter of a million. Some few weeks ago an anonymous donor made the generous offer of £25,000 through Mr. Chamberlain on the condition

that the rest of the £250,000 was subscribed. This same donor, who still desires to remain anonymous, has during last week increased his offer to £37,000, made under the same conditions. At the same time Mr. Chamberlain announced the receipt of a letter from Mr. Andrew Carnegie, the American millionaire, in which he offered to give no less a sum than £50,000 toward the same object and under the same conditions. In his letter to Mr. Chamberlain Mr. Carnegie says: "If I were in your place I should recognize the futility of trying to rival Oxford and Cambridge, which, even if possible, would be useless. These twin seats of learning have their mission and fulfill it; but Birmingham should make the scientific the principal department, the classical subsidiary. If Birmingham were to adopt the policy suggested, taking our Cornell University as its model . . . and give degrees in science as in classics, I should be delighted to contribute the last £50,000 of the sum you have set out to raise to establish a scientific department. . . . Let this gift, therefore, be considered as only a slight acknowledgment of a debt which Pittsburgh, the greatest beneficiary of your steel inventions, can never hope to repay."

Public Bacteriological Laboratories for France.—From the *Medical and Surgical Review of Reviews* for May we learn that M. Emile Dubois has submitted to the Chamber of Deputies a proposal for the establishment in every department, at the public cost, of one or more bacteriological laboratories for the conduct of research with a view to the prevention of contagious diseases in general and tuberculosis in particular. It is but fitting, says the *Review*, that France, the native country of Pasteur, should take a leading position in the development of the science of bacteriology.

Precocious Sexual Maturity in a Newborn Infant.—Dr. A. Macabe Dallas, of Texore, Assam, records (*Indian Medical Record*, May 3d) a peculiar freak of Nature, or precocious maturity. In her first accouchement a lady gave birth to a male child, well developed and lean, the pubes being fully covered with hair about one eighth inch long. There was an unusually large penis, with complete absence of the foreskin. The glans was exposed and the surroundings had the appearance of a very neatly performed operation for circumcision, which it might prove difficult in later life to distinguish from that due to operative measures.

Another Christian-Science Trial. From the *Buffalo Medical Journal* for June we learn that a Mr. and Mrs. Saunders, living at Fort Porter, had a sick child seven years old who died on May 23d. When he was moribund, Dr. Walter D. McCaw, post-surgeon, was called in, but refused to certify to the cause of death and reported the case to the coroner. The next day a post mortem which showed the child to be afflicted with double pneumonia. It was learned that Mr. and Mrs. Kinter, Christian Science readers, had been "treating" the child, and the arrest of the case and the coroners followed. The evidence seems to show that, although Dr. McCaw, post-surgeon, and Dr. Norman W. Wilson, assistant surgeon, were called in to treat the case, they had not been called.

The district attorney, J. P. Cooney, conducting the prosecution, and Dr. McCaw with Cooney as his assistant, Mr. Brown, of Mr. Frank C. Beck's representation the Erie County Medical Society. Dr. W. L.

ham H. Heath is associated with the prosecution as medical expert. The entire moral, social, and financial force of the Christian Scientists has been thrown into the fight, which promises to be a long one.

Climate and Alcohol.—It is generally believed that the consumption of alcohol, especially in concentrated forms, is greatest in cold climates, and that its effects are there less harmful, owing to more rapid oxidation and the more active life of the natives, while the neglect to reduce the amount of alcohol in warmer regions is considered one of the chief causes of disease among Europeans in the tropics. The researches of Dr. Sikorsky, of Kief, as summarized in the *Semaine médicale*, seem to show that this is far from the truth. His country is admirably suited for such an investigation, for over a vast extent of latitude from the White Sea to the Caucasus the Russian peasant has for generations been testing the effects of his favorite solution of alcohol (*vodka*) with a vigor and persistence worthy of a martyr of science. According to official statistics, the north Russian drinks from 2.16 to 3.07 litres absolute alcohol per annum, while his brother in the south imbibes no less than 3.5 to 4.8 litres. Yet the deaths from alcoholism show a regular increase northward, being 15 to 22 to the million in south, 40 in the centre, and 70 to 110 in north Russia. Moreover, there is a marked increase of such deaths in specially cold years. Dr. Sikorsky concludes that cold greatly increases, even to threefold, the toxicity of alcohol, which, as is well known, so far from increasing bodily temperature, acts as a decided antithermic by paralyzing the peripheral vessels and diminishing organic metabolism.—*Revue scientifique* No. 10; abstract in *Janus*, May and June.

Venereal Disease and Divorce.—We gather from an article in the *Medical World* for June that the Paris court of appeals has decided that the fact of marrying while suffering from any venereal disease is sufficient cause alone on which to grant a divorce.

The Cause of the Healing of Tuberculous Peritonitis after Laparotomy.—Hildebrandt (*Münchener medizinische Wochenschrift*, 1898, Nos. 51 and 52; *American Journal of the Medical Sciences*, June) concludes as the result of extended investigation and experiments that the venous hyperemia, which lasts for days after laparotomy, is the important factor in the healing of tuberculous peritonitis after that operation.

The Sanitation of the Principality of Monaco.—According to the *British Medical Journal* for May 27th, Dr. Vivant, of Monte Carlo, in a communication read to the Société de médecine publique et d'hygiène professionnelle de France, summarizes the progress in public sanitation in the principality of Monaco during the last ten years. He deals with the subject under five heads: 1. Sanitary Legislation: This includes notification of infectious diseases, among which are reckoned pulmonary phthisis and tuberculosis in all forms, and strict regulations for the isolation and disinfection of houses and clothing of patients. 2. Drainage: The sewerage systems in the districts of Monaco, Monte Carlo, Le Moulin, and La Condamine are fully explained. 3. Water Supply: This is derived from three sources; chemical analysis of the water from each showed it to contain only a minimum amount of organic matter; and bacteriological examination specially made for the *Bacillus typhosus* and *Bacillus coli com-*

munis showed the absence of pathogenic organisms. 4. Meat Inspection: All meat killed at the abattoirs or imported into the principality is subject to strict inspection by veterinary experts. 5. The author refers also to the installation of the electric light and the electric tramways, and the appointment of a commission to supervise the erection of all new houses, so that plenty of air and sunlight is provided for. He remarks, in conclusion, on the rarity of cancer, pulmonary phthisis, and osseous and articular tuberculosis in the native born.

The International Tuberculosis Congress was formally opened on Wednesday, May 21th, in the chamber of the Reichstag in Berlin. The American representatives were Dr. de Schweinitz, Dr. A. J. Banker, of Columbus, Indiana, and Dr. John Kolmer, of Indianapolis.

The Crusade against the Public Spitting Nuisance.—In a letter to the *Suburban News*, of Hyde Park, Ohio, for June 10th, Dr. John Lewin McLeish, the health officer, enforces the well-known sanitary appeals for public co-operation in stopping this filthy nuisance with the following cogent remarks on the æsthetic side of the question:

"Complaints from various ladies of the village have been made to me of the foul, dirty, nasty agglomeration of mucus and tobacco expectoration upon our sidewalks, and in particular upon the public corners. As long as I am health officer this is going to be stopped, if we have to appoint a sanitary policeman for every corner in the village and for every offender. It should be only necessary to appeal to the sense of common decency and gentility of the offenders to abate the mawkish nuisance, for such it is, and this is the main intent of the regulation suggested.

"Expectoration is a habit, foul, unnecessary, uncleanly, and disgusting, and by the exercise of a little will power the offenders will be surprised to see how easily the incubus can be shaken off. Gentlemen do not find it necessary to go hawking and spitting around the drawing rooms or salons of their lady acquaintances, and they should not find it necessary to befoul the sidewalks and street corners, over which so many of their lady friends and relatives have to pass. An anti-expectoration campaign is an initial *sine qua non* toward the establishment of a first-class state of public health, and when this low, common nuisance is abated, as it is most certainly going to be in Hyde Park, other amendments will be suggested which, it is hoped, will make our classic suburb, of which we are justly proud, a model of sanitary perfection.

"Of course, if the expectorating gentlemen prefer to see the gentler sex swimming in mucus and tobacco spit upon the street corners, and if they have no objection to the increased expenditure for ladies' skirts and dress goods entailed, we will settle down contentedly in our spit-puttering little Venice, and, when it becomes necessary, invest in canoes.

"But if there is any efficacy in a sanitary policeman, a good club, and a wise squire, spitting in Hyde Park has got to go."

Death of Dr. Norman Kerr.—The death is announced as having occurred in London on May 31st of Dr. Norman Kerr, well known as an enthusiastic and able advocate of the cause of total abstinence in relation to alcohol.

Original Communications.

SOME CRITICAL AND DESULTORY REMARKS
ON RECENT LARYNGOLOGICAL AND
RHINOLOGICAL LITERATURE.

By JONATHAN WRIGHT, M.D.

(Ninth Paper.)

TUBERCULOSIS.

OF late years the endeavor to find in the laboratory an agent which could be introduced into the human organism to destroy the tubercle bacillus or its toxins has lost much of the impetus furnished by faith in the scientific spirit which for many years apparently animated workers in the biological laboratories of Germany. Recent incidents in the manufacture of the diphtheria antitoxine, and still more recently of "tubercle antitoxine," have more clearly indicated the commercialism rampant in quarters where we had long grown accustomed to look for truth only. There was a time when it was the proud boast of all scientific men, and it is still the pride of many, that their ideas, their work, and their methods were at the service of any honest fellow-worker. We hear now of closed doors in the laboratory, and, what is still worse, we hear of the necessity of closing them against the thief who filches the ideas of others and parades them as his own. These are the severest blows medical science has received, in our generation at least. The physician of the soul may ply his trade successfully, perhaps at a high salary; but the seeker for truth easily becomes merely the seeker for glory and gold when he lays aside either self-abnegation or self-respect. The very essence of the scientific spirit is annihilated at once by the intrusion of the selfish spirit of commercialism.

It may not be that the failure to discover an antitoxine or a bactericide for the tubercle bacillus in the human organism is to be ascribed entirely to the baleful tendencies which we can not but recognize in the domain of serotherapy. After our study of the therapeutic results of Koch's tuberculin; after the bright hopes which he professed for his various modifications of it; after the sweeping successes alleged for Maragliano's serum; after the more severe calls upon our credulity by the flaming announcements of pseudo-scientists, whose reputations are apparently only revered by the daily press; after it has become apparent that all these things are sinking into the oblivion which hides the myriad curatives of consumption, we are, I am sure, almost ready to believe that such an agent is not discovered because it does not exist. We are still more ready to infer this after reading the recent article by Dr. Trudeau and Dr. Baldwin.* They detail long, laborious, and carefully

varied experiments made with the view of obtaining some immunizing serum which could be used with some hope of success in the therapy of tuberculosis; but their efforts, which were supported by their long experience both in experimental and clinical work, have, as they admit, been entirely unsuccessful, and, while they do not abandon hope of a method being eventually discovered by which immunity to and successful treatment of tuberculosis may be attained, such a result is certainly not now in sight. The sum total of results thus far attained, so far as the practical application of them is concerned, is found in the diagnostic value of tuberculin for the detection of bovine tuberculosis. This is of very great value, and is, of course, worth all the labor and all the disappointment of the hopes which sprang up in connection with its discovery. Dr. Lydia Rabinowitch* has demonstrated the presence of the tubercle bacillus in specimens of market butter coming from a prominent butter merchant of Berlin. We have previous experiments recorded which induce us to believe that this is very exceptional. It can not be too often insisted upon that any given quantity of milk or butter may contain enough tubercle bacilli to kill guinea-pigs and still not contain enough to affect the human infant. This is a point which is as open to conjecture in one direction as the other. Although they say it takes from eight to thirty tubercle bacilli to infect a guinea-pig, there are no data upon which we can base an idea of the requisite minimum dose of the tubercle bacillus for the production of human tuberculosis. The late Dr. Kanthack, together with Dr. Sladen, had, before the death of the former, begun a series of investigations into the relation of the milk supply of Cambridge, England, to tuberculosis. In their paper,† which is merely an introduction to the projected work, their investigations show that over half the dairies supplying the town do so with milk in which the tubercle bacillus can be demonstrated. It is greatly to be regretted that any such work should be interrupted, and especially by the death of the distinguished pathologist who had undertaken it. It is, of course, impossible to say how the causal relation between the two phenomena, tubercle bacilli in the milk and tuberculosis in those who drank it, was to be demonstrated, but presumably through charts showing the coincidence of the two phenomena. Directly connected with this method of the invasion of the tubercle bacillus into the body must be studied the question of the paths which it traverses from the alimentary canal to the point where it causes the formation of tubercle. If we could suppose that tuberculosis of the respiratory organs arose from infection carried by the inspired air, and that tubercle elsewhere comes from the bacilli entering through the alimentary canal, the problem would seem simple, but a very little study of the question

* *American Journal of the Medical Sciences*, December, 1898, and January, 1899.

* *Lancet*, March 11, 1899.

† *Lancet*, January 14, 1899.

soon convinces us that this assumption is not warranted.

It will be remembered that Cornet, in the series of papers which he published ten years ago, showed that dust in the rooms of persons suffering from phthisis pulmonalis contained tubercle bacilli in large numbers. He also showed that this apparently was due to the pulverization of the dried sputum from such patients. He made, however, the comforting statement that the cough of phthisis patients did not spray tubercle bacilli into the air, because bacteria can not arise from the moist surface of the mucous membranes. Bacteriologists not only confirmed experimentally Cornet's observations in regard to the dust, but they reiterated his statements in regard to the tenacity with which bacilli cling to damp surfaces. I am sure that other laryngologists besides myself placed little dependence upon the latter assertions. It is one of the tricks of the laryngologist's trade, which the novice must learn early in his training, to dodge the globe of mucus as it is hurtled through the air from the gaping glottis of his patient. The knowledge that these viscid drops from a tuberculous lung are apt to contain bacilli always adds an extra agility to his movements. A recent paper of B. Fraenkel* reviews the work of Pflügge,† who has shown conclusively that phthisical patients *do* in the act of coughing, sneezing, clearing the throat, etc., spray tubercle bacilli into the air, and that in all probability this is the origin of many of the tubercle bacilli in dust. While this may be the origin of many of the tubercle bacilli in the dust, such numbers as could be expelled from the mouth in this way must, of course, be insignificant in comparison with the numbers expelled voluntarily in the profuse purulent expectoration of phthisical patients. It is a significant fact that in spite of the constant exposure of laryngologists to such contagion in their daily examination of the upper air-passages of tuberculous patients, no notable preponderance of tuberculous disease among them has been recorded. This is one of many practical observations which has convinced us that the majority of individuals are immune to ordinary doses of the tubercle bacillus accidentally taken in, and yet there are some individuals who are apparently infected by the smallest of such doses. It requires but very little reflection to perceive in this view of the case how important a factor in the aetiology is this individual index, but the fact must never be lost sight of that this individual immunity varies from time to time, and even that it is quite possible that such a dose may be taken in as would overcome the strongest systemic resistance. Fraenkel says that he has induced a large number of his phthisis patients to wear over their mouths a device for filtering the expired air, and in this way protecting those with whom they associate. In some instances he says patients may be induced to

do this under the delusion suggested to them by their medical attendant that the odoriferous medication with which the filtering cloth may be saturated is efficacious when continuously breathed in. Doubtless there are plenty of credulous patients to be found on whom this deception could be practised, but I am happy in the belief that there are not enough medical men in existence who would so far forget their own dignity and that of their profession as to make this suggestion of any value in checking the ravages of tuberculosis; while, on the other hand, I doubt if any other means could be adopted to make phthisical patients generally use this altruistic device.

The behavior of the larynx toward tuberculous infection has long been an interesting puzzle to laryngologists. I have long believed that its careful study would elicit important hints as to the mode of tuberculous infection and as to the means by which tubercle is disseminated throughout the body. One very great stumbling-block in the discussion of the means by which the larynx becomes tuberculous is contained in the terms of the problem itself as usually expressed: "What is the cause of tuberculous laryngitis?" It would be better to put the question thus: "Why is it that the larynx usually escapes infection with the tubercle bacillus?" Whether we suppose the tubercle bacillus to enter beneath the epithelium in the fauces or to pass downward with the air and secretions to the alveoli of the lungs, or whether it enters the system through the intestinal tract and is carried to the periphery by the blood or the lymph channels—whichever of these methods of invasion we believe to be the usual one, the problem which confronts us is, why the lungs are invaded so much more frequently than the larynx. If the infection enters at the fauces, or if it is carried in the inspired air, surely the larynx is more exposed to contagion than the pulmonary parenchyma. Moreover, when the latter has become affected, tuberculous sputum from a melting lung is dashed over the laryngeal mucous membrane by a rasping cough, and yet a very small percentage of cases of pulmonary phthisis acquire a laryngeal lesion before they die, and this small percentage is still further reduced if we rule out the cases in which the larynx breaks down in the last stages of the disease. Krieg has lately* analyzed seven hundred cases of tuberculous laryngitis coming under his observation, with the view of discovering the bearing such an analysis may have upon the question of the method of the tuberculous infection of the larynx. The results of his observations are summed up as follows:

"1. Among the seven hundred cases of tuberculous laryngitis are two hundred and seventy-five, or 39.3 per cent., unilateral, and four hundred and twenty-five, or 60.7 per cent., not unilateral. The unilateral cases appear then not to be at all unusual—as, for instance, Heinze assumes.

* *Berliner Klinische Wochenschrift*, No. 2, 1909.

† *Zeitschrift f. Hygiene*, Band xvi, S. 185.

* *Archiv für Laryngologie*, Band viii, Heft 3.

"2. Of the two hundred and seventy-five unilateral cases, two hundred and fifty-two correspond with the affected lung, or 91.6 per cent., while only twenty-three, or 8.4 per cent., do not correspond. Those that do correspond are therefore the vast majority of the cases.

"3. Of the seven hundred cases of laryngeal tuberculosis there are, therefore, two hundred and fifty-two, or thirty-six per cent., both unilateral and corresponding to the lung lesion."

As Krieg says, these and similar statistics, if reliable, are hard to explain on any hypothesis but that of propagation through the lymph channels. There should be no preponderance of infection on one side or the other if the infection occurred either primarily through the inspired air, or secondarily through the sputum coughed up from below. If, on the other hand, the bacillus enters beneath the epithelium of the fauces and finds its way into the cervical lymph channels, or if it enters by the gastro-intestinal tract primarily, and so gets into the lymphatics, or if it starts from the already infected lung by the way of the lymph channels, then we should naturally expect the pulmonary and laryngeal lesion to be on the same side. It is evident also that the blood-vessels would not be expected to produce this coincidence. It will be seen also that these statistics have a wider bearing than that which applies simply to the method of the secondary laryngeal involvement, for they affect the whole question both from the purely pathological standpoint and from the much more important standpoint of personal hygiene and general sanitation. But are the facts on which such statistics are based to be unhesitatingly accepted? What laryngologist is so expert that he can be sure from the picture in his mirror that the lesion is confined to one side of the larynx, or even that the surface manifestations of tuberculosis are confined to one side? The laryngoscope, even in the most skilled hands, is far from being an instrument of such precision. Even direct inspection of the surface after death furnishes no criterion of where the tubercle began or how far the microscope will show it has extended. On the other hand, what diagnostician is so acute as to be sure, even if he is so presumptuous as to assert, from auscultatory signs, that only one lung is involved? How is the diagnostician to form an opinion, trustworthy enough for such statistics as these, as to the condition of the bronchial glands at the base of the lungs? Anatomists may be able to tell us why the lymph channels prefer to deposit the germ at the level of the vocal cords, for at this situation tuberculous disease of the larynx usually first manifests itself, rather than at the bifurcation of the trachea or in the pharynx, but such an explanation at least has never come under my notice.

Nevertheless, this argument of Krieg is based on a large enough number of observations, if unbiased, to exclude casual errors. It is, moreover, supported by the difficulty we have in understanding how tubercle bacilli

get into the lungs themselves in any other way. The inspired air by the time it reaches even the larynx has had nearly all the germs filtered out of it, while it is only the residual air and not the tidal air at all which ever comes in contact with the peripheral twigs and leaves of the respiratory tree. Furthermore, primary tuberculous laryngitis is so rare that it has been confidently though wrongly, asserted never to exist. Were infection brought about by the germs in the tidal air in the larynx, it is hard to see why tuberculosis of the larynx should be so rarely observed without a well-marked lung lesion.

If we have long been in doubt as to tubercle bacilli reaching the lungs in the tidal air, post-mortem examinations have cast considerable doubts upon infection being frequent from the alimentary canal below the esophagus. Of late, various investigations have gone to show that in infants, contrary to former belief, thoracic tuberculosis is more common than abdominal, and that even children dying of pulmonary consumption, although they almost constantly swallow their sputum, do not by any means always present on autopsy evidence of lesions in the abdominal viscera. This is especially the case in infants under one year of age—the very age at which they are nourished by milk. Clinicians are beginning to declare that many cases diagnosed as tuberculosis of the bowels among the children of the poor are really only cases of marasmus from malnutrition, many of them promptly recovering when brought under proper dietetic and hygienic conditions.

There are, therefore, good reasons for believing that the tubercle bacillus enters the human organism before it reaches either the lungs or the stomach, in at least a large number, if not in the majority, of the cases. If this is the rule, and not the exception, it would explain many phenomena, but not by any means all of them. Tubercle bacilli may be deposited in the nose, nasopharynx, and oropharynx by the inspired air, or in the oropharynx and esophagus by the food, and thus passing through the epithelium to the lymph channels may be distributed to the various localities where they produce tubercle. It must not be forgotten, in considering certain localities, from clinical experience, as especially liable to the deposit of tubercle, that post-mortem examinations show that other localities which are closed to clinical investigation are quite as frequently the site of tuberculous disease; but under the supposition that the bacillus passes through the epithelium in the mouth or its annexa, we are at once reminded that these are especially the localities which, while perfectly accessible to examination, are strikingly free from primary tuberculosis. Shall we assume that the tubercle bacillus must usually first acquire some virulent property from a lymph node before it can cause tubercle? Can we gather any hint of this from the difference in the clinical behavior of lupus and other forms of tuberculosis?

The most reliable subjective symptom of pulmonary tuberculosis is the spitting of blood. It does not re-

quire a great deal of clinical experience before one gets into the habit of mind which is, perhaps, not entirely scientific in the presence of any case with this history. The presumptive diagnosis is at once phthisis pulmonalis, and our subsequent investigations are made with that bias in mind. When the laryngologist by his examination has excluded the possible sources of hemorrhage which lie above the rima glottidis, this mental bias is still more firmly established; but evidently he is in danger of error.

Professor Massei, the eminent laryngologist of Naples, describes* a class of cases to which he gives the name of chronic hemorrhagic tracheal catarrh. These patients occasionally spit small quantities of blood. They have a dry cough and present the ordinary picture of incipient pulmonary tuberculosis, but deep, brilliant illumination of the trachea discloses engorged blood-vessels in a chronically inflamed mucous membrane. In the absence of tubercle bacilli and of positive physical signs in the lungs this is sufficient to establish the diagnosis. So far as my own experience goes, I should think these cases must be very rare, as I have no recollection of ever having seen a case of spitting of blood, which I was sure came from below the glottis, in whose sputum I did not eventually find the tubercle bacillus. In very many cases, however, a satisfactory view of the trachea can not be had with the laryngoscope. We usually have to be satisfied with a more or less incomplete picture of the tracheal mucosa. It is therefore very possible that cases such as Massei has described may go undetected. The condition of the trachea no doubt may frequently explain the puzzling coughs which we have to treat, but the absence of physical signs over the chest wall is seldom conclusive evidence of the non-involvement of the lung substance in such cases. While, therefore, we should wrong our patients by regarding blood spitting, in the absence of other signs, as satisfactory evidence, of tuberculosis of the lungs, we should be much more apt to wrong them by not keeping in mind that diagnosis as a probability in any given case. Notwithstanding the fact that the tubercle bacillus, when found in the sputum, absolutely establishes the diagnosis, and its persistent absence renders the diagnosis of tuberculosis very improbable, and although this has been recognized now for more than fifteen years, a large number of practitioners fail to examine, or have examined, the sputum of patients, not only when other signs point to phthisis pulmonalis, but even when the nature of the case is not clear. This is not only true of hospital practice, but is also true of private practice. I have known of several instances in which life has been lost through mistakes which need not have been made had the rule been adhered to of always examining the sputum in cases of laryngitis accompanying chronic pulmonary troubles. I am sorry to be obliged

to confess that I have myself not been free from blame in some of these cases. I refer to cases of laryngeal and pulmonary syphilis dying from the want of the iodide of potassium and mercury. The absence of the tubercle bacillus from the sputum is regarded as a sign of little value as to the freedom of the lungs from tuberculous disease. While this is doubtless true, it is important that laryngologists should beware of persisting in a preconceived diagnosis of tuberculous laryngitis when the tubercle bacillus can not be found in the sputum. Neither should they cling to the diagnosis of tubercle because physical signs intimate the presence of a concomitant pulmonary lesion. As a rule, almost without exception, when a phthisical patient is affected with tuberculous laryngitis the lung lesion has gone so far that tubercle bacilli on careful examination are always found in the sputum. Pulmonary syphilis will cause the same physical signs as pulmonary tuberculosis.

In this connection attention may be drawn to the report of a so-called case of primary laryngeal tuberculosis reported by Trifelletti,* since it illustrates another phase of mistaken differential diagnosis in these cases, and also throws some light upon the statistics of cure of tubercular laryngitis. It offers a marked contrast to some of the carefully reported cases which Dr. Gleitsmann has shown at the Academy of Medicine. Trifelletti's case was that of a man who had a marked history of previous syphilitic lesions. In his larynx he presented a condition which the reporter declares bore every clinical appearance of tertiary syphilis, and he gave no definite signs of pulmonary involvement. He received antisyphilitic treatment, and the laryngeal lesion improved markedly up to a certain point, when it remained stationary for a time, and then slowly became worse. Examination of the sputum did not show tubercle bacilli. Examination of the tissues also failed to reveal them, but showed small round-celled infiltration with a number of giant cells. Some of the tissue was used to inoculate a rabbit, but the results were negative. Surgical treatment of the laryngeal lesion brought about cicatrization and cure. Although, as said above, the presence of the tubercle bacillus was not demonstrated, although the clinical evidence of syphilis was perfectly clear, yet, on the strength of the finding of giant cells and the incomplete results of antisyphilitic medication, the diagnosis of a primary tuberculosis was made and the cure of laryngeal tuberculosis was attributed to surgical treatment. The actual occurrence of either of these events is one of the rarest phenomena known to medical science. As a matter of fact, on the other hand, it is not an uncommon thing at all, as Manasse has pointed out for the nose, to find large numbers of giant cells in the syphilitic lesions of the upper air-passages. So far, then, as the report of this case of primary tuberculosis of the larynx and of its cure by surgical means can be

* *Archivii ital. di laringologia*, Fasc. 1, 1898.

* *Archivii ital. di laringologia*, No. 1, 1898.

judged, the casual reader is warranted in regarding the writer's views of its nature as mistaken. With such a history, the demonstration of the tubercle bacillus is positively essential to the diagnosis of tuberculosis. One can not even admit the probability of a mixed infection or of the possibility of a tuberculous infection of a syphilitic lesion. Hansemann, in the *Berliner klinische Wochenschrift*, No. 2, 1898, has written a very good paper on secondary infection by the tubercle bacillus.

In his well-known opposition to the contentions of the high contagionists, he goes to what would appear to them extreme limits. He states that many cases of cheesy degeneration of the pulmonary parenchyma occur following repeated attacks of pneumonia, and that these areas of degeneration in many cases become only secondarily infected by the tubercle bacillus—that frequently many syphilitic lesions become secondarily infected by the tubercle bacillus. There have been many recent publications which tend to show that the general consensus of opinion is veering toward these conclusions, although many of us who have always been, even in the era of the *furor* of bacteriomania, low contagionists, will hesitate to believe that this is the usual sequence of events.

A PRIMARY POLYMORPHOUS-CELL SARCOMA OF THE NOSE.

WITH UNIVERSAL METASTASIS
AND FORMATION OF A FREE SARCOMATOUS MASS
IN THE RIGHT VENTRICULAR CAVITY

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THE reports of sarcoma of the nasal passages have multiplied to so great an extent during the last several years that the condition can no longer be looked upon as one of very rare occurrence. Bosworth, in 1889, had collected from the literature previous to that year reports of forty-one cases. In 1896 twenty-one cases were added to this list by Boylan, and I have been able to find in the literature since the latter's paper reports of twenty-seven additional cases. It is evident from this rapid increase of reported cases that sarcoma of the nose must occur with some degree of frequency.

The sarcomatous tumors described as being found in the nose present a wide variety in kind. Small and large round cell, spindle cell, lymphosarcoma, fibrosarcoma, myxosarcoma, osteosarcoma, osteoid sarcoma, angiosarcoma, myxosarcoma, alveolar sarcoma, and melanotic sarcoma have been reported as occurring in this region. The site of the tumor presents also a wide range. The turbinated and nasal bones, the perpendicular of these bones, the nasal cartilages, the cartilage of the mucosa of the nose, the blood vessels and connective tissue of the mucosa of the nose and nasopharynx have all given rise to sarcomata. In a number of cases an attempt has been made to prove their origin from con-

ditional polyp. The evidence upon this point, however, is very slight, and there is no proof of any close relation between a benign polyp and sarcoma. From the cases reported they would seem to be of independent origin. The nasal sarcoma, because of its location and the conditions of its growth, often presents a polypoid form, and in those cases in which a myxoma was thought to have become sarcomatous it is more probable that the so-called polyp was malignant from the beginning. The possibility of the development of a sarcoma in a benign polyp need not be denied, but in those cases where this change was thought to have taken place the microscopic evidence is either entirely wanting or insufficient.

The opinion is quite generally held in the older literature that sarcoma of the nasal passages is not so malignant as sarcoma occurring in other regions of the body. Bosworth concludes from the result of his study of forty-two cases that "sarcoma of the nose does not apparently present the same malignant tendencies as it does when found in other locations." Warren, in his *Surgical Pathology*, says: "The disease does not appear to show the same malignant tendencies in the nasal passages that it does in other localities." And Boylan, from the study of his twenty-one cases, is inclined to favor this opinion, since rapid recurrence took place after operation in the minority of cases, and in others there was a prolonged or permanent cure. From these points he concludes that the prognosis in nasal sarcoma is relatively favorable.

A study of the literature since Boylan's paper, however, leads to the conclusion that there is no justification for the assumption that sarcoma of the nasal passages is less malignant than in other regions. It is less malignant only in so far as it is in a situation where it may possibly be thoroughly removed. While many of the nasal sarcomata described have been of slow growth and slow recurrence, this is also true of sarcomata in other parts of the body. The slow growth of a sarcoma or carcinoma should never deceive us as to its possibilities of malignancy or lead us to delay in operative measures. Slow growing sarcomata of the nose have sometimes taken on an extraordinarily rapid growth just as in other part of the body. The possibility of a favorable prognosis in nasal sarcoma is based, therefore, purely upon the operative conditions, and not upon the character of the tumor.

The case which I present here is one of great value, first, in that it is a new addition to the list of sarcomata found in the nose; second, in that it is of its great malignancy; third, because of its great extent and interesting character of the metastasis; and the occurrence of a free sarcomatous mass in the right ventricular cavity. The history of the case is as follows:

Mr. J. F., aged thirty-one years, was admitted to the University Hospital on the 1st of April, 1897. He was a lumberman, born in a well-to-do executive family

history. Previous to the beginning of the present condition his health had been good. A year and a half before admission his right nostril became partially occluded. By blowing his nose with some violence he could force out large "scabby, flaky masses." This condition lasted for a year, when a vesicular eruption becoming pustular gradually spread over the right side of the nose, extending to the left. Three months before admission he had had a number of "polypoids" removed from his right nostril. The patient did not know whether a microscopic examination of these had been made, but was told that they were ordinary nasal polypi. From the treatment of the case it is evident that the operator had regarded them as benign growths, as when the patient entered the hospital no suspicion had been raised as to the malignant nature of his disease.

He had been under treatment with a number of physicians who had diagnosed his condition as eczema, syphilis, and lupus. He had no history of acquired syphilis, and under specific treatment his condition had grown steadily worse.

A month before admission he had noticed numbness over the left side of the nose, left cheek, upper lip, and forehead to the median line. Diplopia, left-sided ptosis, and dilatation of the left pupil soon followed.

On admission the general condition of the patient appeared fair. He complained of weakness, nervousness, insomnia, and of dull pain in his forehead. His appetite was poor, and bowels were constipated. He passed about one litre of urine daily, very highly colored, and with specific gravity of 1.034. His nostrils were completely occluded, his breathing being entirely by the mouth and very shallow in character. His nose was symmetrically enlarged; the skin covered with yellowish, opaque crusts, with scattered pustules. Around this and extending slightly into the skin of each cheek there was redness with firm induration. The nostrils were filled with grayish-red masses. There was no odor.

The sense of smell was entirely lost. There was complete anaesthesia over the distribution of the supraorbital and infraorbital branches of the fifth nerve. There was some atrophy of the muscles in this area. Ptosis of the left lid was present, with complete paralysis of the muscles of the left eyeball. Sight was diminished in the left eye. The retinal examination showed a marked degree of choked disk. The patient's mind was clear.

A clinical diagnosis was made of malignant tumor of the nose with secondaries at the base of the brain, involving the first, second, third, fourth, the first and second branches of the fifth motor fibres of the fifth and the sixth cranial nerves. The condition of the patient gradually became worse. No operation was attempted. On the 14th of May he had attacks of nausea and vomiting, followed by great disturbance of respiration and circulation. The extremities became oedematous, the patient sank into coma and died on the 17th of May. The necropsy was performed by me in the university laboratory of pathology four hours after the patient's death. The gross findings were as follows:

Section-praecord.—Body of medium height and slender build. The musculature good, slightly flabby. Fair amount of panniculus. No oedema. Skin sallow, nutrition fair. Marked hypostasis, amounting to cyanosis over the upper part of thorax, head, and back. Rigor mortis present in all muscles. Body heat present.

Head: Face cyanotic. There is a subcutaneous growth extending over the entire nose and a short distance into each cheek. The skin over this is thickened, rough, scaly,

with numerous minute vesicles. The nostrils are completely closed by masses of soft, grayish-red tissue. The growth does not extend into the mouth. Over the bridge of the nose there is a small ulcer covered with surgical dressings. The nasal bones and cartilage seem completely replaced by the growth.

Brain: A small, soft growth, of the size of a cherry, is found on the inner surface of the dura near the longitudinal sinus. The pia is congested; all of the sinuses are distended with fluid blood. The brain substance is hyperemic and oedematous. There is a large amount of clear fluid in the lateral ventricles, which are somewhat distended. The pineal body is replaced by a tumor nodule, of the size of a large cherry. Otherwise the brain seems normal. The hypophysis is replaced by a tumor growth. The left third nerve is surrounded by a thick mass of new growth which is partly colloid in appearance. The left Gasserian ganglion is greatly enlarged and completely surrounded by new growth. The nasal fossa is completely filled with a soft tumor mass, showing extensive mucous degeneration. This mass is directly continuous with tumor masses filling up the frontal sinus, the sphenomaxillary fossa, and with the mass in the nostrils. The left cavernous sinus is also filled with tumor tissue. All of these masses are very soft, homogeneous, and show myxomatous change. The right third nerve and Gasserian ganglion are normal.

The examination of mouth, larynx, and trachea is negative.

Thyroid enlarged, and shows colloid degeneration.

The main incision shows marked venous congestion everywhere. The tissues bleed freely. The muscles are red, moist, and soft. There is a moderate amount of abdominal fat. The position of the abdominal organs is normal. There is no fluid in the peritoneal cavity.

Diaphragm extends to the fourth intercostal space on the right, to the fifth interspace on the left.

No remains of the thymus are present. The mediastinal tissue contains a number of enlarged lymph glands.

Pericardium: The pericardium contains about one hundred cubic centimetres of cloudy fluid in which there are small flakes of fibrin. The surface of the pericardium is dull and clouded. There are no new growths in the pericardial layers.

Heart: Of about twice the normal size, and very irregular in shape. The surface is irregularly nodular, the nodules appearing yellowish as seen through the epicardium. They are elevated, firm, and do not show any umbilication. A thick ring of new growth extends around the auriculo-ventricular groove. On section the heart muscle is almost entirely replaced by homogeneous yellowish-white areas, contrasting strongly with the deep red of the remaining heart muscle. These areas project as rounded nodules into the cavities of the heart, and form the nodules seen on the surface beneath the epicardium.

Many of these areas are surrounded by a zone of hyperemia or hemorrhage. The centre of some of the nodules is soft, in others there is a colloid appearance. The endocardium appears unchanged, and in no place does it give any evidence of a breaking-through of the tumor. In the left ventricular cavity there is a large jelly clot with some fluid blood, and in the auricles and great vessels are large white clots. The right ventricle contains some fluid blood and a large firm mass, about the size and shape of a large English walnut. It is grayish-red in color, and has a ribbed and furrowed surface

suggesting the appearance of brain coral. Its surface presents no appearance of any previous union with the heart wall, nor can any evidence of such connection be found in the endocardium of the right heart.

Lungs: There are about five hundred cubic centimetres of turbid fluid in each pleural sac. The surfaces of the pleura are cloudy and are covered with numerous flakes of fibrin. All over the surfaces of both parietal and visceral pleura are scattered numerous small growths, varying in size, but for the most part of the size of a small pea. In the parietal pleura they are arranged in rows corresponding to the direction of the ribs. The right lung shows extreme congestion and oedema. There is a moderate anthracosis. Throughout its substance there are many small growths, most abundant about the bronchi and under the pleura. These tumors are soft, white, and perfectly homogeneous. The left lung presents a similar appearance, but shows fewer of the growths. There are several small deep-red areas in the lower lobe just under the pleura. These are triangular in shape, with their bases beneath the pleura.

Bronchial glands: These contain large masses of new growth. On section they are soft, white, and homogeneous, and show a colloid appearance in their central portions.

The examination of the thoracic vessels and œsophagus is negative.

Spleen enlarged, very soft, cyanotic. On its anterior margin near the deepest fissure are two cavernous tumors about the size of small hickory nuts. On section the pulp is deep red, very soft, flows readily. The follicles are not visible and the stroma is unchanged. There are a number of depressed areas, grayish-red in color, with deep-red borders, and of firm consistence.

Adrenals show no change.

Kidneys: Both enlarged and cyanotic. The fat capsule is rather thick. The fibrous capsule is not adherent, except in areas corresponding to small white nodules in the capsule. On section both kidneys present practically the same appearances. The cortex is increased in thickness, deep bluish-red, of increased consistence. The cut surface bleeds very freely. The glomeruli can not be made out. The pelvis is filled with large tumor masses extending up between the pyramids into the kidney substance, and also into the pyramids themselves. The new growth is very soft, white, homogeneous, and in many places myxomatous. The chief portion of the new growth seems to be in the cavity of the pelvis, which is greatly dilated. It is not adherent to the mucosa of the pelvis, as it can be easily separated from this, leaving the surface free and apparently unchanged. The growths extend out around the renal vessels into the retroperitoneal tissues. The retroperitoneal glands are replaced by large masses of new growth of the same character as described above. The ureters are dilated, the mucosa is thickened.

Bladder: The walls are thickened, and there is a small area of hyperæmia with fibrinous exudate on the posterior wall.

Genitals: The external genitals are apparently unchanged. The right testis is slightly enlarged. The body of the testis is replaced by tumor growth of the same nature as that described above. The left testis contains a growth of the size of a walnut. It is of the same character as that described above. The prostate is enlarged, but appears normal.

Intestines: Appendix normal. The mucosa of the small and large intestine is injected. In the serous coat

are several small nodules of new growth. The mesenteric glands contain also tumor nodules.

Stomach: On the floor of stomach about the middle of the greater curvature there is a round ulcer, of about the size of a dollar, with sharp clean edges, extending to the muscular coat. Near this are two irregular areas of infiltration of new growth in the mucosa and submucosa. They are flat and do not extend into the muscularis. On section they present the same appearance seen in all of the other tumor masses, and show a beginning central degeneration. In other parts of the mucosa there are small erosions with thickened bases and indurated edges.

Pancreas: The head of the pancreas is replaced by a large tumor mass. On section this shows the same appearance as seen elsewhere.

Liver: The size is about normal; the left lobe is very long and thin. On section, the surface is dark-red and cyanotic, and bleeds freely. In some areas there is a distinct nutmeg appearance; the connective tissue is somewhat increased. No growths can be perceived by the naked eye. The examination of the gall bladder and biliary passages is negative.

Lymph glands: The cervical glands on the left side contain large tumor masses.

Microscopical Examination.—An abundance of material was taken from all parts of the body and fixed in alcohol, mercuric bichloride, and Müller's fluid. Both paraffin and celloidin imbedding methods were employed, and the sections were stained with various stains, hamatoxylin and eosin and Van Gieson's method being most commonly used. The microscopical examination of the sections taken from the primary tumor and from the metastases revealed such a variety of pictures that at first sight it seemed impossible that the different growths could be of the same origin. A careful study of these, however, made plain the fact that the differences in appearance were due to differences in the age of the growths and to the conditions in the tissues where they were located.

Primary growth: Section taken from the periphery of the primary tumor in the nasal fossa and from the infiltration of the skin and subcutaneous tissue of the nose present the appearance of a small round-cell sarcoma. The mass of the structure is composed of small round, deeply staining cells; there is a very scanty reticulum, with numerous large and thin-walled blood-vessels lying in intimate contact with the cells. The deeper parts of the nasal tumor give varied pictures. There the cells for the greater part are not of the small, round-cell type, but are much larger and very irregular in shape. Division figures are very numerous, and many of the cells have large and very irregularly shaped nuclei possessing a great excess of chromatin. "Grape-cluster" nuclei are very common, and many giant cells are found. In these older parts of the growth there is a greater amount of intercellular substance than in the peripheral portions. The cells are separated by a clear, slightly refractive substance, which does not stain with eosin or acid fuchsin, but gives the reactions for mucin. In the fresh tumor the intercellular substance must have been fluid. As in these older parts of the growth the number of cells is not nearly so great as in the areas of more recent development, it is probable that the intercellular substance has arisen from the degeneration or solution of part of the cells. Support is given to this view by the fact that the central part of all the larger masses is filled with a similar mucoid substance, the cells having entirely disappeared. In the fresh tumor the areas present-

ed a colloid appearance, sometimes firm in consistence, at other times more watery. The posterior part of the nasal fossa was completely filled with this jellylike mucin. In many places these cystlike spaces are surrounded by a capsule of granulation tissue. It would seem that the tumor in its growth had reached a certain height in these areas, the cells had completely degenerated, and there had been an attempt at encapsulation. No typical mucous tissue was found in any part of the original tumor or in any of the metastases.

Dura: The small growth taken from the dura presents the appearance of a small round-cell sarcoma.

Pineal body: The growth here is polymorphous-celled and shows myxomatous degeneration in the central part. The peripheral portion has the appearance of a small round-cell sarcoma.

Hypophysis: This is almost entirely replaced by a central tumor mass which is of the type of a polymorphous-cell alveolar sarcoma. The central part shows a marked myxomatous change. Many giant cells are present here, and the irregularity in the size of the nuclei is very marked. In the periphery are nodules of small round cells.

Gasserian ganglion: The sections of the mass taken from the region of the left Gasserian ganglion show a beautiful picture of the infiltration of large nerve trunks and ganglion by sarcoma cells. There are many of the ganglion cells preserved, surrounded by small, round cells, from which they stand out in sharp contrast. They are swollen and granular, but their nuclei and nucleoli can be distinctly made out, and their nucleated capsules appear unchanged. The nerve fibres of the large nerve trunks are widely separated by tumor cells and in many places have a knotted, swollen appearance. In the sections stained by Van Gieson's method these knotted fibres have a greenish color. The tumor cells here, like those in the central portions of the primary growth, are very irregular in size and shape. There are many giant cells with large nuclei showing marked hyperchromatism. Many of the nuclei are star-shaped, others are ragged in outline. Caryomitotic and amitotic division forms are abundant. There are many ectatic blood-vessels. The central portion of the growth shows also a myxomatous change. Throughout the trunk of the left third nerve there is an infiltration of sarcoma cells. The colloid mass into which the third nerve passed is a cavity filled with a colloidlike mucin surrounded by a capsule of granulation tissue. Outside of this capsule the tumor cells are of more uniform size and there are not so many giant cells. The blood-vessels are very numerous and large.

Heart: The entire heart wall is infiltrated with tumor cells. The muscle in many areas is wholly replaced by nodules of polymorphous cells. The larger nodules show myxomatous change and in every way present an appearance similar to that of the original growth. The remaining muscle cells are greatly atrophied and are widely separated by small round cells. Many of the muscle fibres show simple and waxy necrosis. The entire endocardium is infiltrated with small round cells, and in one area in the right ventricular wall the tumor cells have broken through the endothelium and form a small flattened growth on the wall of the ventricular cavity. This could not be seen in the naked-eye examination.

The sections of the free mass in the right ventricular cavity show it to be of sarcomatous structure. There are many cells larger than leucocytes and possessing large vacuolated nuclei. A few giant cells are found, and

many cells with large, irregular, deeply-staining nuclei. The majority of the cells are of the small round variety. At one side of the mass there is a collection of red blood-cells and fibrin. A very scanty reticulum can be made out and a few small blood-vessels can be seen. The origin of the mass seems very evident after the microscopical study of the endocardium of the right ventricle. It is undoubtedly a polypoid nodule that, projecting from the endocardium, grew until it was too large to pass out of the ventricle, and then breaking loose continued to grow as a free body. The mass shows no necrosis or degeneration.

Lung and pleura: The small growths in the pleura are of the type of a small round-cell sarcoma. The larger ones show a polymorphous variety of cells and myxomatous degeneration. The small nodules throughout the lung consist of small round cells, the larger ones of polymorphous cells. There is hardly a blood-vessel throughout the lung that has not a circumvascular growth of sarcoma cells. Numerous emboli of sarcoma cells are found in the capillaries. In many of the smallest growths the cells are irregular in size and shape and show great excess of chromatin. The lung shows extreme oedema and congestion, and there are several hæmorrhagic infarcts and small areas of broncho-pneumonia. Many of the larger tumor nodules show a healing process and the formation of scar tissue in the central part of the nodule. This can be seen in all stages, from a beginning formation of granulation tissue around the myxomatous portion of the tumor to nodules made up of scar tissue alone.

Spleen: Small nodules of tumor cells are found throughout this organ. There are also a number of anæmic infarcts.

Liver: A number of small nodules of small round cells are found in the periportal connective tissue.

Kidneys: There is an acute degenerative nephritis present, and the greater part of both kidneys is replaced by masses of sarcomatous tissue of the same structure as described above. Many of the smaller nodules are made up of the polymorphous cell type.

Pancreas: The head of the pancreas is almost entirely replaced by a sarcomatous mass, which is made up chiefly of small round cells, but contains also many polymorphous cells.

Stomach: The base of the round ulcer and the flat infiltrations of the mucosa consist of nodules of sarcoma. The ulcer is apparently caused by the mucous degeneration of a large nodule projecting through the mucosa. The structure of these nodules in the wall of the stomach is the same as that found in the other tumors.

Intestine: The small nodules in the serosa are of the same type of sarcoma as that described above.

Testis: The tumors here present the appearance of a small round-cell sarcoma. Areas of mucous degeneration are abundant, and the blood-vessels are very numerous and ectatic.

Prostate: The prostate contains localized areas of small round cells.

Lymph glands: The cervical, peribronchial, mesenteric, and retroperitoneal lymph glands contain large nodules of polymorphous or small round-cell sarcoma. The majority of these show mucous degeneration.

Summary.—All of the growths are of the nature of sarcoma. The majority of the smaller nodules and the periphery of all the larger ones are made up of small, round, deeply-staining cells having but little intercellular substance and lying in intimate contact with the

blood-vessels. In the central part of all the larger nodules, and in some of the small ones, the cells are larger, polymorphous, and there is an increase in the intercellular substance, which is myxomatous in character. In many of the nodules the entire central part of the growth has undergone a mucous degeneration, and early stages of this degeneration are seen in all of the growths. The tumors are further characterized throughout by the number and size of the blood-vessels. From the structure of the growth the diagnosis of the tumor as a myxomatous polymorphous-celled sarcoma would seem most appropriate.

That the growth in the nasal fossa is the primary one there can be no reasonable doubt. The history of the case, the development of the symptoms, the size and structure of the nasal growth all support this view. The exact site of origin can not be determined. The patient affirmed that it appeared first in the right nostril upon the right side of the septum. Moreover, the relation of the sarcoma to the polyps stated to have been removed can not be settled in the absence of any definite microscopical evidence concerning their structure. The fact that the tumor everywhere shows a marked tendency to a mucous degeneration of its cells and the formation of a myxomatous intercellular substance might be taken as an evidence of an inherited tendency on the part of its cells tending to show a descent from a myxomatous polyp. This, unfortunately, will not admit of further confirmation.

The points of special interest in this case are the widespread metastases and the intracardiac growth. Secondaries were found in the dura, pineal body, hypophysis, cavernous sinus, lungs, pleura, heart, liver, spleen, kidneys, pancreas, stomach, intestines, peritoneum, testicles, prostate, and the cervical, bronchial, retroperitoneal, and mesenteric lymph glands. The richness of the growth in cellular elements, the scanty stroma, the numerous large thin-walled blood-vessels, the smallness and shape of the cells, all contributed to the facility of the rapid dissemination of the tumor. The numerous metastases throughout both venous and arterial systems are easily explained by the above-mentioned factors.

The free sarcomatous body in the right ventricular cavity forms the most important feature of the case. Intracardiac and intravenous growths are very rare both in carcinoma and sarcoma, but have been described in both, more frequently in the case of the latter. Kanthack* has described a case of carcinoma of the testis in which there was a metastatic mass upon the tricuspid valve extending through the auricle into the inferior vena cava and through the tricuspid orifice into the cavity of the right ventricle. The origin of this seemed to have been from an intravenous growth in the inferior vena cava, a fragment of which must have become separated and grafted upon the tricuspid valve, where it continued to grow.

The probable origin in my case is that suggested above—namely, the breaking loose of a polypoid nodule

from the endocardium, its retention in the ventricle, and its subsequent growth. Microscopically the endocardium was infiltrated with sarcoma cells, and in one place there was found the thin, flattened growth on the surface of the endocardium. This may have been the origin of the mass, or, on the other hand, it may have arisen from a primary embolus of tumor cells retained in the heart cavity. The numerous emboli of tumor cells found in the lung vessels and the hemorrhagic infarcts of the lung may have resulted from the breaking loose of portions of this intracardiac growth. The anemic infarcts in the spleen were also probably caused by emboli of sarcoma cells, as masses of these cells could be seen growing in dilated blood-spaces of this organ.

Another point of interest in the growth of this tumor is its tendency to self-healing. As mentioned above, this could be seen in all stages, from the beginning of the formation of a granulation-tissue capsule around the area of degeneration to completely formed nodules of scar tissue completely replacing the tumor.

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HOW TO GIVE ANÆSTHETICS.*

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FROM the title of this paper it might be judged that I mean to pose as an instructor in the art of anæsthetization, or perhaps place myself on a higher level than the many physicians who are daily called upon to administer anæsthetics. This is not my object, but I mean only to present to you such facts and experiences as appeal to me as I now look back over my past eight years' work in this field.

I believe that those practitioners who administer anæsthetics will agree with me that they have derived little or no benefit from reference or text books on this subject, but have been compelled, like myself, to study and learn the art of anæsthetization in the hard school of experience.

Ether and chloroform are the only drugs I have been called upon to administer. I have given ether seven hundred and eighty times and chloroform two hundred and ninety-five times, making a total of a thousand and seventy-five anæsthesias, and, I am glad to be able to report, without one death. These anæsthetics were not used in selected cases, but were administered in the charity wards of city institutions, college dispensaries, private hospitals, and private practice.

I believe that the art of administering anæsthetics can be learned only by continual practice. Books and the experiences of others count for little, for the prime prerequisites for the making of a successful anæsthetist are self-confidence, the knowledge of the dangers that might arise during the administration, and ability to combat them when they occur.

What surgeon or physician does not appreciate what a sense of responsibility and what a bugbear the anæsthesia is to him, and how different does he feel when a stranger is giving the anæsthetic! How often is the operation so small that it really is of secondary importance as compared with the dangers of anæsthesia! I believe, therefore, that the time should be close at hand when in this country more physicians will make a study of and follow as a specialty the administration of anæsthetics; and, furthermore, that this subject will be

taught separately and thoroughly in our medical schools.

There are some underlying rules and principles which should govern every administrator of anæsthetics, and they are the following:

He must give the anæsthetic, and absolutely and positively do nothing else. By this I mean he must not allow his whole attention or any part of it to be taken away for a minute from the patient under the anæsthetic. Neither the interesting operation, the talkative physicians around, nor a fascinating nurse should for one second engage his attention, for in that time his patient might die—I care not how well skilled he may believe himself to be, or how certain he feels that he has a healthy patient under the anæsthetic, for it has been under exactly such circumstances that a death from anæsthesia has occurred.

I have not any doubt but that death will occasionally occur from an anæsthetic, even when administered by men who have had experience in the art, from causes over which they have no control, and it therefore behooves us to do everything in our power to place ourselves in a position, should death occur, that we may be able to conscientiously say that we have taken every precaution, were thoroughly prepared, and have given our undivided attention to our patient.

Time will not permit me in this paper to discuss or even refer to the many methods of administering an anæsthetic, but I shall give you only what I have found to be a successful method, and a few hints that may be of benefit to you.

If possible, know your patient long enough to determine for yourself how you must handle him or her. Therein lies the great secret of proper anæsthetization.

Bearing in mind that the phenomena of anæsthesia are largely dependent upon temperament, age, physique, quantity and quality of blood, state of the respiration, circulation, and other factors, we can not fail to recognize the advantages of ascertaining as far as possible the condition of the patient intrusted to our care. In the majority of cases a brief inspection is all that is necessary. The more practice the anæsthetist has had the less need will there be for a systematic examination; but even so, it is better to err on the side of an unnecessarily cautious investigation than to overlook symptoms or signs which, if recognized, would be of service in conducting the administration. It is certainly erroneous to argue that, as the patient must have an anæsthetic, there is no need to ascertain his fitness for it. By carefully taking into consideration the condition of the patient we not only place ourselves in a better position to decide which anæsthetic to choose, but we are enabled to anticipate the occurrence of important symptoms that might arise during the administration.

A great deal of valuable information, both positive and negative, is afforded by the general appearance and bearing of the patient. Let us in a few words consider

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what can be learned by simply observing the individual before us.

Should he walk to the operating table, his mode of progression may afford us information. We should notice whether he moves actively or whether with considerable hesitation or difficulty. Should the exertion be followed by breathlessness, we ought specially to bear the fact in mind. Should the patient be partially or wholly recumbent when we are called upon to anesthetize him, we should notice what position is assumed by choice. We should more particularly pay attention to the number of pillows the patient requires. Those who suffer from chronic bronchitis, emphysema, other affections of the air-passages, or extreme abdominal distention, almost invariably insist on being propped up to a greater or lesser degree. Marked orthopnea will attract attention, and should be regarded as a very unfavorable symptom. Patients suffering from unilateral pulmonary or pleural affections will probably be found lying on the diseased side. While observing and drawing our inferences from the walk or posture of the patient, we are able, as a rule, to roughly estimate his age. It must be remembered that the anesthetist is concerned as much with the apparent as the real age of his patient.

Temperament, too, which plays an important part in determining the manner in which an anæsthetic is taken, usually quickly shows itself on these occasions. This is more particularly the case with hysteria. It must be remembered, however, that women who are liable to outbursts of hysteria sometimes conceal their want of control so efficiently that the observer is deceived. The overworked and highly strung patient will be recognized, and should be treated with the utmost gentleness and care. Previous excesses in alcohol, as a rule, present little or no difficulty in their detection. The general physique of the patient will be observed. Gross, flabby individuals, with a large abdomen, muddy complexion, and double chin, will probably not be easy subjects to manage. Florid, muscular young men, who live an outdoor life and enjoy excellent health are also likely to give the administrator some difficulty. Persons afflicted with extreme obesity may also be regarded as bad subjects for certain anæsthetics, especially ether. Conversely, patients of slim build and more or less anæmic in appearance do particularly well during general anæsthesia.

The color of the patient's face and lips should be noticed. A florid, rosy tint denotes, as a rule, a good state of health and the absence of nervousness or respiratory derangements. The hectic flush, however, must not be allowed to deceive. Florid, and more especially dusky-looking and congested looking patients will be very likely to show cyanosis if air is withheld even to a slight degree. The pallor of true anæmia is readily recognized. Apart, however, from this pallor we must remember that very nervous and apprehensive subjects

are prone to be much paler than usual at the time of administration. Their pallor disappears when anæsthesia is established, and, often to the surprise of the anesthetist, to whom the patient may be a stranger, a good, florid color will persist throughout the administration.

The anesthetist should take special note of the manner in which respiration is performed, and if any marked abnormality in this direction is detected, a further examination of the patient should be made. If there is no obvious shortness of breath or distress in breathing, and if the respiratory movements are quiet and the color of the lips good, there is, as a rule, no need for any further examination. It is usually a good plan, however, to ask the patient to take a deep breath. In this way the administrator will see whether the chest expands freely and whether the respiration is principally thoracic or abdominal. A loose, frequent, or hollow cough should not escape attention.

The pulse should invariably be felt, and, as a general rule, it is a good plan to apply the ear or stethoscope to the chest. Feebleness, irregularity, intermittency, or marked slowness of pulse should lead to further inquiry. The oral cavity should be inspected. Artificial teeth, even though firmly fixed and apparently safe, should always be removed, so as to avoid the chance of their becoming lodged in the trachea and strangling the patient. If a partial or complete nasal obstruction is present, in order not to give trouble a mouth prop should be inserted so as to give an oral air way.

Before administering the anæsthetic certain appliances and drugs should be at hand, and by that I mean, so near that the anesthetist can put his hand on whatever he wants the instant he needs it: An instrument for opening the mouth and, if necessary, maintaining it in this position. A forceps, preferably one with a flat blade, so as to be able to grasp the tongue firmly, but at the same time not lacerate it. Besides this forceps, a thin, long forceps should be at hand with which to grasp small sponges for wiping out the mouth and pharynx. Of drugs, nitrite of amyl, best in the shape of five-minim pearls, which can be readily crushed and used by inhalation. Strychnine sulphate, one sixtieth or one fortieth of a grain, should be kept ready in a hypodermic syringe. Nitroglycerin, digitalis, aromatic spirits of ammonia, and whiskey. The Bliss-Moore Co., of St. Louis, have got up for me a portable case containing these articles.

Just a few words regarding the patient's clothing during anæsthesia: It must always be loose, no constrictions of any kind to be allowed to remain on the body. The patient should either be clad in a warm dressing gown or wrapped in a blanket, especially if feeble or in advanced years.

Before beginning the remarks of the mode of administering the anæsthetic, I want to call particular attention to the all important rule that the stomach and

bowels of the patient should be empty. I have made it a rule never to give an anæsthetic when I ascertain that the patient has taken food three hours or less before the time of operation, unless the case is of an emergency character, when the exception becomes necessary. This precaution avoids the possibility of the patient strangling from vomited material in the trachea while in no condition to dislodge it, and at the same time prevents the vomiting from disturbing the surgeon. Now, as to the choice of the anæsthetic and the mode of its administration.

Conditions being equal, my preference is for ether. Perhaps I lean toward ether because I have given it oftener than chloroform, and, therefore, feel more at home with it. I am not of the opinion that so often is expressed that one can give an overdose of ether and the result not be as serious as if it were chloroform. I believe a good rule to follow is to give the anæsthetic to the patient, and not the patient to the anæsthetic; in other words, give just as much anæsthetic as is necessary and not one drop more. It has been my great privilege to administer anæsthetics more than six hundred times for Professor H. Tuholske, and I know that the same careful and conscientious way which he carries out in every step and detail of his operations has been forced upon me in the giving of anæsthetics. In his service I have certainly learned that, all things being equal, the less of the anæsthetic drug that is given the better will the patients do; also that patients have a greater tolerance for pain under these circumstances than is often credited to them. Several times when the extreme weakness of our patient prohibited the continuance of the anæsthetic, have I seen him perform celiotomy, handle the abdominal viscera, yes, even make intestinal anastomoses with the patient wide awake. So, also, have I seen him perform craniectomy entirely without an anæsthetic; also resection of the superior maxilla.

I have tried the open and closed methods of etherization, and I believe the open way to be the better. I think the Allis inhaler, which allows a certain amount of admixture of pure air, brings about a safer anæsthesia, and certainly a pleasanter one for the patient. I have found pupillary reflexes an infallible guide to the degree of narcosis. No attention is ever paid to other reflexes. I regard touching the cornea as unscientific as it is unclean. It tells you nothing more than that your patient is unable to resent the insult. A contracted, immovable pupil teaches us that we have surgical narcosis; a dilated, immovable pupil predicts danger everywhere; while, again, a dilated pupil which reacts to light shows partial anæsthesia. I have found that pure air often revives patients without the use of drugs.

In conclusion, I wish to suggest a safe rule to guide the anæsthetizer in his work—viz., do not start the administration before everything is ready for the operation. Keep your patients just under enough to allow the surgeon to do thorough work, and aim to have them

return to consciousness as soon as they reach their bed-rooms.

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THE INOCULATION THEORY OF MALARIA.

By WALTER B. JAMES, M.D.

By the inoculation theory of malaria, at the present day, we mean the theory of the inoculation of the disease by mosquitoes; a theory which is closely associated with the names of Manson in England, Ross in India, and Bignami, Grassi, and others in Italy.

The possibility that mosquitoes stand in a close relation to the malarial poison is not a new idea. It is mentioned by some of the Roman writers at about the time of the Christian era. It has for many years been a matter of popular belief among the natives of tropical countries, as Italy, India, and Africa, and was also suggested many years ago in this country.

That malaria may be conveyed from diseased to healthy persons by direct intravenous injection of blood taken from persons suffering from the disease was conclusively proved in the early days of the study of the malarial organism.

In support of the theory that there is a fairly close relation between the poison of malarial disease and mosquitoes, many facts of common observation may be given. For instance, the malarial season is generally that at which mosquitoes most abound. Again, in a malarial region mosquitoes are almost always found, although the converse of this is by no means true.

The physical conditions which produce mosquitoes are also those which are supposed to predispose to the development of malaria, such as the presence of pools of stagnant water, or rank decaying vegetation with the presence of moisture and heat.

Precautions which are found to be of service in protecting from malarial disease are at the same time effective against the attacks of mosquitoes, such as the draining of neighboring pools or swamps, remaining indoors in the evening, sleeping at a considerable elevation above the ground, and, moreover, it has been claimed by some travelers in tropical climates that sleeping under nets has secured immunity from malarial attacks.

Laveran in 1891, Pfeiffer in 1892, Manson in 1894, and Bignami and Mendini in 1896 all suggested the possibility that the solution of the malarial problem was to be looked for along this line of inquiry. But to Manson especially belongs the credit of having first attacked the question seriously, and of having contributed facts of real value in its settlement. He interested Ross, a British surgeon in India, in the matter, and it is really chiefly to the studies of the latter that we owe most of the facts upon which the inoculation theory of malaria is based.

To McCallum, Bignami, and a number of others,

however, is due much credit for additional observations; while the very valuable work of Professor Smith on the ætiology of Texas cattle fever has done much to clear up the relations of malarial disease. I shall best use the short time at my disposal if I state briefly the main facts in the matter which have been observed, and then indicate the bearing which it is claimed they have upon the nature of malarial disease.

Manson observed that the flagellated bodies developed in microscopical preparations only in blood that had been for some time removed from the vessels, and he therefore concluded that this stage in the development of the organism took place under natural conditions outside the body.

Then, noticing that the body from which the flagella are protruded has no apparent apparatus for penetrating the vessel walls, he decided that the services of some outside agent were necessary, and naturally turned to the mosquito as the commonest parasite living upon human blood.

Ross, studying blood from the stomachs of mosquitoes that had fed upon malarial subjects, found that seventy per cent. of the crescentic bodies present had developed flagella.

Moreover, in the wall of the stomach in such mosquitoes, there are found hæmatozoa which appear to be malarial organisms that have penetrated into this structure and then become encapsulated.

Ross now took up the study of what is called bird malaria, which had already been investigated by Danilewsky and others.

Many birds, especially in tropical climates, suffer from the presence in their blood of parasites which in appearance and in manner of development closely resemble the malarial parasite of man. Two varieties of these are especially important, called *Halteridium* and *Proteosoma*.

Ross reasoned that facts demonstrated in the life history of these hæmatozoa would probably at least throw some light upon the problems of the human parasite. He found that if mosquitoes were fed upon the blood of birds infected with *Proteosoma*, after a certain time their stomach walls were found to contain pigmented cells resembling those which have just been referred to, and which are apparently a stage in the life history of the organism.

In the mean time, McCallum, studying blood containing *Halteridium*, found that certain of these hæmatozoa left the blood corpuscles in which they had developed and then threw out flagella. These flagella then separated from the parent organism and wandered about in the blood plasma until they met another *Halteridium*, into which they entered. The latter then took on motile powers and showed a marked ability to penetrate various tissues.

In the stomach wall of mosquitoes filled with *Proteosoma* blood, Ross found certain pigmented organisms

which appeared to be a coccidium or encysted stage of the parasite. If these were crushed they were found to be filled with minute rodlike bodies which he called germinal rods, and which he believed to be spores.

The inference was then drawn that the sequence of events in *Halteridium* and probably also in *Proteosoma* is as follows: The organism taken into the stomach of a mosquito from an infected bird, and inclosed in a blood capsule, leaves its blood cell and then throws out flagella. These flagella are then set free, and, being actively motile, wander about in the plasma until they meet another organism, into which they enter, and then act as fertilizing agents.

This latter organism then becomes motile and acquires the power of penetration and then enters the stomach wall.

Here it enters upon a coccidium or encysted stage and develops within itself a large number of germinal rods which correspond to spores, and which are then ready to initiate a new generation of the hæmatozoon.

In the mosquito there is a gland which is known as the veneno-salivary gland. It is situated in the insect's head, and its duct communicates with the proboscis. Its function is to furnish a poisonous secretion which is injected into the tissues of the victim after the insect has made its puncture. This secretion is supposed to produce a local paralysis of the tissues and so hinder the natural retraction of the walls of the smaller vessels which would prevent a free flow of blood into the wound.

In the cells of this gland in mosquitoes fed upon *Proteosoma* blood Ross found enormous numbers of germinal rods.

Next he took sparrows in whose blood the *Proteosoma* was found. Upon these he allowed mosquitoes to feed. He then allowed these same insects access to sparrows from whose blood *Proteosoma* had been shown to be absent. After a certain time the hæmatozoa appeared in the blood of these latter, and in this way he was able to prove his ability to transmit the disease from infected to healthy sparrows through the agency of mosquitoes.

Regarding *Proteosoma* in birds, then, it seems fair to assume that the mosquito may serve as an intermediary host, but whether it is its only intermediary host or not we do not know. Moreover, it is fairly proved that the disease may be communicated by the bite of infected mosquitoes.

Reasoning by analogy, Manson and Ross and most of the Italian observers believe that the same holds good for the malarial poison in man. In support of this is the fact that mosquitoes fed upon natural blood show similar pigmented and apparently encysted forms of the organism imbedded in the stomach wall.

A recent and very important observation of Bonami lends support to this view. He took a man who had been under observation in the hospital for several years,

and who was known to be free from malarial disease. He was kept in a small room in which a large number of mosquitoes, gathered in an intensely malarial district of the Campagna, were liberated. They bit the patient freely, and in a few days he was attacked with typical malarial fever and showed the organisms in his blood.

The ability to act as host to *Halleridium*, *Proteosoma*, or the malarial organism does not belong equally to all mosquitoes. It is found in each case that in order to obtain the above results it is necessary to have certain definite species of the insects.

The most recent observations which we have, and the news of which has reached us only within the past few days, are from Grassi, Bignami, and Bastianelli. They have made an elaborate study of mosquitoes fed upon patients suffering from æstivo-autumnal fever and tertian fever. They used a certain species of mosquito called *Anopheles claviger*, which is fairly abundant in the neighborhood of Rome, and which is found to answer best for the purposes of these experiments. Their results confirm in almost every particular the observations made by Ross in studying *Proteosoma*, and seem to justify his inference that the life histories of the two forms of hæmatozoa are practically the same.

The question now arises, Are the observations which I have briefly outlined trustworthy, and, if so, are the inferences that have been drawn from them justified? It is only fair to state that as yet but few experiments have been made and published confirming them. This is due partly to the fact that Ross's publications are themselves only a few months old, partly to the great practical difficulties which stand in the way of the carrying out of such investigations. In the studying of the parasites of such small insects as mosquitoes, the highest degree of technical skill is required, and more than ordinary patience. Moreover, the work can be done only in a malarial region, and generally far removed from laboratory facilities. To one who has had practical experience of the difficulties met with in dissecting out and studying the stomachs of mosquitoes, it is surprising that even so much should have been already accomplished.

It is of much interest, however, to know that Ross's preparations of mosquito dissections have been shown to Laveran, Koch, and Nuttall, and that they all independently regard them as convincing evidences of the trustworthiness of his statements, and they all, in their most recent publications or interviews, express a belief in the truth of his theory.

There remains, however, a great deal of work to be done before we may regard it as absolutely proved, and even then but a small part of the life history of the malarial protozoon will have been cleared up. But even as Ross's work stands at present it constitutes the most important contribution to the study of malaria that has been made since the publication of Laveran's

original work giving an account of the discovery of the organism.

Many questions suggest themselves for solution before practical use can be made of the facts already determined. For instance, if the mosquito is the intermediary host, is it the only one, and is it thus essential to the development of the poison in any given locality, or may the organism find shelter in other insects as well? Again, if malaria is acquired by the bites of mosquitoes, is this the only way in which it may be taken? In order to answer these various questions it will be necessary to follow out more closely that part of the life history of the organism which is passed outside the human body, and also perhaps outside its mosquito host. Facts are being gradually accumulated bearing upon these questions.

Bignami and his associates have demonstrated that two days after æstivo-autumnal blood rich in crescentic bodies has been taken into the stomach of a mosquito, the coccidium forms have found their way into the stomach and intestinal wall, and lie encapsulated between the muscle fibres. On the sixth day they have increased enormously in size and project into the lumen of the alimentary canal. Very gentle pressure at this stage suffices to rupture the cyst and set free in the intestine myriads of the germinal rods or spores. It is supposed that these spores then find their way into the water.

The question comes up, Can man now be infected with malaria by drinking this water, or is it more likely that the spores find their way into the larval forms of mosquitoes, remain with these until they develop into the full-grown insects, and so are again conveyed to the animals upon which the mosquitoes feed? It is generally thought that the latter is more probable; this would be closely analogous to what is known to take place in the case of the protozoon of Texas cattle fever, the cattle tick being the intermediary host.

Showing the widespread interest that has been aroused in this question, the Natural Science Department of the British Museum has recently published and distributed throughout the British Colonial Service a small pamphlet giving a description of the best methods of catching, preserving, and studying mosquitoes.

The British Government has also sent a commission abroad to investigate the methods used by Bignami and his associates in Italy and by Ross in India.

The German Government also has sent Koch to Africa to pursue there his studies in the inoculation theory of malaria.

The mosquito theory would help to explain another phenomenon which it is stated has been observed by physicians—namely, that certain localities which had never before been malarious have become so after the migration into them of persons coming from malarious countries. It is easily conceivable that healthy mosquitoes taking the blood of such malarial individuals may die and fall into pools of water, having first laid

their eggs in them and so infect these pools, and gradually change a nonmalarial into a malarial district.

Should the mosquito-inoculation theory of the disease be finally proved, it would render the outlook for prevention far more hopeful than it has ever been. In many localities mosquitoes may be much more easily got rid of than is generally believed to be the case. Careful attention to the drawing off of all stagnant water will sometimes remove the pest. Where such water can not be drained, kerosene may from time to time be floated on the surface, and is said to prevent the development of mosquito larvae. Thus the theory is one of the greatest practical interest to the entire community, and the present indications point to the rapid accumulation of a still further mass of facts of great scientific interest.

SURGICAL OPERATIONS DURING HYPNOTIC SLEEP.

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I DESIRE to give somewhat in detail two cases of surgical operations during hypnotic sleep by Dr. Schmeltz, of Nice.

The writer may be allowed to say that, while attending clinics, he has witnessed the extraction of a large, painful tooth (by Forel, of Zürich) during hypnosis, where the patient, who was an intelligent trained nurse, had not the least consciousness of the operation.

While there can be no doubt that in certain cases hypnotism may be as serviceable in surgery as the usual anesthetics, we, however, do not believe that it is generally practicable. But it is interesting to note special cases under special conditions in which it has been useful.

CASE I. Amputation of the Breast.—Miss M., twenty years of age, born in Italy, consulted Dr. Schmeltz for a swelling in the right breast. During the examination of her malady, which was a very large sarcoma, he observed that the young woman could very easily be plunged into a hypnotic state. By a steady gaze and a few downward passes, he in a few seconds put her to sleep, catalepsy and anesthesia being apparently complete. As treatment, the doctor proposed a complete ablation of the diseased glands. The neighboring glands were in no way hardened. Her general condition was good, and there was no inherited cancer in the family.

The young woman, with the consent of her parents, readily agreed to be operated upon under hypnotic anesthesia.

Desiring to be absolutely sure of the success of the operation, Dr. Schmeltz hypnotized his patient at intervals of two and three days, and was successful, especially as to the anesthesia—in fact, disinfecting her—was stuck deep into different parts of her body, without producing a shadow of pain.

On the day set for the operation, in spite of the suggestion made the day before for the young woman to be

at the doctor's office at 7.30 A. M., she did not arrive until 9, and then entered reluctantly. Her parents had indiscreetly told her of the time set for the operation, and it was impossible to obtain complete anesthesia. It was not until after the departure of the other physician, whom Dr. Schmeltz had invited to be present, that she regained confidence. The anesthesia was then produced and, owing to a suggestion which led her to believe that the operation would be postponed a week, all fear disappeared. She declared during the sleep that she had been terrified by the thought of the operation, and therefore could not sleep as desired. She gave assurance that the operation could take place next day, because on waking she was convinced that she had eight days before her.

The next day she arrived at the hour fixed during the sleep. Anesthesia was complete from the first, and the patient seemed admirably disposed.

Two other physicians assisted Dr. Schmeltz. After a minute examination of the hands and diseased part, Dr. Schmeltz made the classic oval incision for the amputation of the breast, which permitted him to take out that much-diseased organ with the aponeurosis of the large pectoral. A thorough examination of the axilla showed that the ganglia were not diseased. After five tubes were inserted the wound was closed by means of thirty-two metallic sutures. During the entire operation, which lasted about an hour, the part was continually washed with a sublimate solution. Ten arteries were involved and were twisted by the forceps. After a fresh wash of sublimate had been applied the region was covered with iodoform, making an antiseptic and compressive dressing.

At the beginning of the operation the assistants were somewhat excited, and begged the operator to have chloroform and ether in reserve; but they were quickly reassured when they saw the patient absolutely insensible in an anesthesia such as is obtained by large doses of chloroform.

Dr. Schmeltz operated slowly and at his ease. The patient appeared to feel very gay, and from time to time laughed loudly, as though to testify that she felt no pain. To aid the operation she took the most favorable attitudes, extending her right arm, and thus avoiding the necessity of having it held.

The results of the operation were satisfactory in every respect; her temperature did not rise above 37.3° C. (99.1° F.). The tubes were withdrawn the third day. Until a complete cure was effected, which was on the fifteenth day, but one dressing was made, consisting of iodoform and absorbent cotton. The sutures were removed as soon as the reunion was complete.

Throughout the operation the patient's face was very pallid, but the pupils of her eyes did not dilate, and her pulse was not feeble.

A number of physicians saw Miss M. at this time; they also saw the tumor, which weighed about four pounds.

CASE II. Ectropion of the Lower Left Eyelid.—Miss V., eighteen years of age, was attacked by ectropion when ten months old, as a result of an abscess in the sub-orbital region which had been lanced by a physician.

She had undergone two operations and the lid fell lower. When she consulted the doctor she told him that she had suffered so much from the inhalations of chloroform that she would never again undergo an anesthesia produced in that way.

A series of ten minutes sufficed to convince the doc-

tor that the operation could take place during a state of complete magnetic insensibility. Dr. Macario and Dr. Huillet were invited to be present at the operation.

All the usual antiseptic measures were taken, and, after putting the patient in a profound sleep, her eye was washed with a sublimate solution of 6 to 1,000. The patient, in a state of somnambulism, at once said, "That is a very strong remedy that you use." When asked if the irrigation burned, she said, "Not at all; I do not feel the slightest pain."

A V-shaped incision was made in the lid and the fragment removed. Three pins were then placed parallel through the ends of the wound and a metallic thread united them. A wash of sublimate with vaseline and iodoform was spread on the seam; a dry antiseptic dressing held the eye immovable. The pins and wire were removed on the fifth day; the wound was thoroughly united, and healed without the shadow of a complication and without a drop of pus.

The operation was performed slowly, and the eye, without any aid whatever, remained wide open, in spite of the contact with the instruments.

Owing to the pallor of the face and *quasi* absence of respiration, it was for a moment believed that the patient had fainted, but the large, soft pulse showed that this pseudo-syncope was but the effect of hypnosis. The patient did not feel the slightest pain, and when she awoke she would not believe that she had been operated upon.

RUBBER GLOVES IN ASEPTIC ABDOMINAL SURGERY, WITH A NEW METHOD OF STERILIZATION AND BACTERIOLOGICAL PROVINGS.

By C. H. RICHARDSON, M. D.,

ALBANY.

[A Study from the Surgical Laboratory of W. G. Macdonald.]

STERILITY as applied to the bare hands is almost a relative term. I believe few surgeons' hands are ever absolutely sterile, regardless of the method used to accomplish that purpose. The subject then reduces itself to one of the degree of infection in nearly all cases where rubber gloves are not used. It is only a question of immunity or whether the leucocytes are capable of mastering the situation in a certain percentage of patients. If they do, primary union ensues; if not, suppuration. Hence it is that we sometimes see dirty surgeons get healing by first intention. Of course, if almost any of the recognized methods for cleansing the hands are conscientiously followed, the cases where suppuration will follow will be very few, but for the benefit of the *few* is this paper written.

It stands to reason that a patient with an impoverished condition of the blood and little vital resistance will have a suppurative wound from little infection introduced, when three times the amount in a healthful patient can es no trouble. We do not always know beforehand which patients possess these qualities and to what extent, so the only safe way is to introduce none at all, and this can be done by the proper use of rubber gloves and a rigid technique.

Not infrequently we see a surgeon, three or four assistants, and two or three nurses "washed up" for an operation, all either handling instruments or assisting the operator. I saw such an occurrence in one of the large hospitals in New York city not long ago. This is an unnecessary risk—a great risk. It could just as well have been reduced sixty-two and a half per cent. by reducing to three persons all told, and the remaining thirty-seven and a half per cent. to nothing by the scientific use of rubber gloves, and the operation done with less confusion and greater dispatch. I am familiar with no operation that requires more than one surgeon, one good assistant, and one nurse—that is, to come in contact with the wound. I venture to say that had cultures been taken from beneath and from the sides of the nails and between the fingers, three anyway, if not more, of the eight would have shown germs—perhaps not virulent ones, but as apt to be as not.

Suture material has been made the "scapegoat" in unfortunate infections in many cases where it was not at fault. It will never cause trouble if properly prepared. Catgut prepared by the camol method is absolutely germless. Silk by sterilization under steam pressure is aseptic. Silkworm gut by the nitrate-of-silver process, followed by the action of the autoclave, is beyond dispute. Any of the various suture materials can be sterilized by one of the above-mentioned methods. The proper preparation of dressings and instruments is a part of operating-room technique and familiar to every surgeon.

The field of operation can be rendered so nearly aseptic by careful preparation that the worst that can happen from this source is stitch-hole abscesses, which are rare nowadays. What is left? The air (?) and the hands. Why take any risk when it can be so easily avoided? Cotton or Lisle thread gloves were a step in the right direction, but they are used but little at the present time, as they only partly accomplished the desired result, consequently were quickly succeeded by rubber gloves, now generally used, or ought to be, by all up-to-date surgeons in the country.

The hands should be washed as carefully in all cases as though gloves were not intended to be worn, for, should an accident happen, then the chance of infection is reduced.

The following I believe to be the best system to accomplish the purpose, advocates of permanganate of potassium and oxalic acid, chlorinated lime, mustard, carbolic acid, etc., to the contrary notwithstanding. The finger nails should be cleared of gross dirt before beginning. Use sterilized water and change it often. With a boiled, stiff hand brush and green soap scrub for a period of five minutes (it is longer by actual time than it seems when hurried) the lower third of arm, forearm, and hands, giving special attention to the sides and base of nails as well as underneath them and between the fingers. A sharp-pointed stick (orange wood is the tough-

est) assists in this locality. This removes the superficial scales of epithelium harboring the staphylococci. An ounce of oil of turpentine now applied and thoroughly rubbed in forms a creamy emulsion, removing most of the oily sebaceous material always present, and is a mild antiseptic. Another application of brush and soap for two minutes, and then carefully rinse the hands in plenty of fresh, sterilized water. Have some one pour one or two ounces of ninety-five per cent. alcohol over the arms and hands, rubbing them at the same time. This further frees the hands from any fatty material. Submerge in arm basin filled with warm 1-to-1,000 bichloride solution the scrubbed area for five minutes, then rinse in normal salt solution to remove the bichloride solution remaining. If rubber gloves are to be worn, dry the hands with a sterilized towel. Have some one remove the pins from the towel in which the gloves are carried; remove the gauze wrapper yourself (it is sterile) and put on the gloves, which by the following plan of sterilization will require no powder shaken inside and will slip on as readily as a kid glove. It is well to now submerge the gloved hand in a 1-to-1,000 sublimate solution for two or three minutes and rinse in normal salt solution. Touch nothing from this minute but your instruments. If these procedures are rigidly carried out, a patient will never become infected from the hands, now the greatest source of danger in most well-regulated hospitals, the technique in other respects being first class.

Gloves are now manufactured without seams and so thin that the tactile sensation is but slightly impaired. True, when wet, the tissue grasped has a tendency to slip, but this can be remedied somewhat by having the ends ground or roughened, as suggested by Dr. Macdonald. Their cost is nominal—about a dollar and a half a pair—and with the method of sterilization soon to be described they will last indefinitely.

I think the principal reason that they are not used by every one is the trouble and difficulty of getting them on satisfactorily after the preexisting methods of sterilization. A few will be enumerated with their main objections or defects.

I. Boiling similar to that of instruments just before operation. They are wet and will not go on readily unless vaseline is used. This imparts a sticky, slimy sensation and is nonsurgical.

II. Boiling previously and attempting to draw on under bichloride solution. This leaves more or less water in the ends of the fingers and "bags" in the palms of the hands and between the fingers.

III. Boiling and drying by slow heat, then with bits of gauze laid about the fingers and rolled up in rubber sheet until ready for use. This necessitates handling and exposure to contamination, besides requiring powdered starch or soapstone shaken inside them when used.

IV. Packing the fingers and palms with gauze bandages to hold them open, put in the autoclave and

subjected to steam under pressure. This is the best method so far, but about the third time they are prepared in this way the fingers will adhere and tear when attempting to separate them. The heat is too great.

All of the above-mentioned objections are overcome by first washing the gloves in soda solution, inside and out, and holding for a minute over a heater or gas flame, reversing once. Dust liberally the inside with dry-heat sterilized soapstone. Wrap each pair in a double layer of gauze. Two pairs of, say, No. 8's for surgeon and assistant, and one pair No. 6 for nurse, laid on a towel and placed in a formic-aldehyde sterilizer* for two hours. Wrap in towel already at hand, mark sizes with graphite, and they are ready at any or all times for hospital or out-of-town use. Four or five sets can be prepared at a time as well as one. They are sterile, dry, already powdered, and can be put on in ten seconds.

I once saw a prominent surgeon wash his hands with ordinary toilet soap, take from his bag a pair of rubber sterilized gloves nicely done up in a sterile rubber sheet previously prepared, pick them up by the band, and, after shaking from a glass pepper box some starch powder, proceed to put them on. The nurse, being a stranger to his ways, had prepared a bowl of sublimate solution. Noticing it, he turned to me and said: "Bichloride is poisonous; it has no place in surgery," meaning, of course, if we are aseptic, there is no occasion for antiseptics. The theory is correct, but suppose an accident should happen to the gloves, as it does sometimes when operating. It would amount to about the same as doing the operation without washing at all, and, besides, the dangers of contamination when putting them on without having the hands as nearly sterile as possible to begin with. Completeness as to detail obtains here as well as in any other part of a rigid technique.

I am indebted to Dr. A. J. Lartigan, assistant director of the Bender Hygienic Laboratory, for furnishing me with pure cultures of streptococci, staphylococci, *Bacillus coli communis*, Klebs-Löffler bacillus, *Bacillus pyocyaneus*, typhoid bacillus, and yeast fungi. After having passed through the sterilizer, and then been a sufficient time in the proper culture medium for each, they showed absolutely no growth or life.

27 EAGLE STREET.

Therapeutical Notes.

Dionin in the Treatment of Morphinomania.—According to the *Presse médicale* for May 20th, Professor von Mering found dionin as being of great service in

* The principle of a cheap and serviceable sterilizer is a square tin box, with door and wire gauze shelves. Formic aldehyde pastilles are converted into pure formic aldehyde gas by heating over an alcohol lamp in a cup-shaped arrangement fitted to the chimney. Schering's is the one used by us.

the treatment of morphinomania. The following formulae are given:

- R̄ Dionin 4½ grains;
Distilled water 300 “

M. Fifteen drops to be taken two or three times daily in a little sugar water.

Or—

- R̄ Dionin 4½ grains;
Extract of licorice, sufficient to make thirty pills.

M. From one to three pills to be taken at bedtime.

For hypodermic injection the following formula is recommended:

- R̄ Dionin 1½ grain;
Distilled water 160 minims.

M. From one to three injections of sixteen minims each may be administered in the twenty-four hours.

The Preventive Action of Chloroform Water against Post-anæsthetic Accidents.—M. Weber (*Journal des praticiens*, May 6th), as a consequence of observations on a patient who had been submitted to chloroform medication by internal administration, and who was subsequently submitted to operation, recommends that for some weeks a patient to be operated on should, if possible, be placed upon the following mixture:

- R̄ Chloroform water 3,000 grains;
Tincture of badi-
anum (*Illicium ani-*
satum) or essence } of each, 4 drops.
of mint,
Tincture of anise, }

M. Filter after twelve hours.

Subsequently to his first accidental observation, M. Weber has experimented upon many patients and finds that this treatment, when practicable, prevents the superintention of the unpleasant accidents attendant ordinarily on the administration of chloroform.

For Stomatitis.—Dr. Cassine (*Nord médical*, May 15th) recommends:

- R̄ Distilled water, } of each.... 150 grains;
Neutral glycerin, }
Chlorate of sodium 15 “
Hydrochloride of cocaine 1½ grain.

M.

For local application. Or—

- R̄ Lemon juice, } of each 225 grains;
Glycerin, }
Boric acid, } of each, 15 “
Chlorate of potassium, }

M.

For local application.

Erosions or ulcers should be touched with silver nitrate, equal parts of iodine and glycerin, 1-in-20 solution of sulphate of zinc, or 1-in-10 of sulphate of copper, chromic acid, or other astringent.

Internally the author recommends from sixty to a hundred and twenty grains of the chlorate of potassium or sodium in divided doses in the twenty-four hours. These substances being eliminated by the salivary glands, he says, act as a sort of continuous collutory.

Napelline as a Substitute for Morphine and to Overcome the Pain following the Withdrawal of Morphine.—M. Rodet (*Presse médicale*, April 5th; *Medicine*, June) claims to have experimented extensively with various drugs in seeking a substitute for morphine

that would overcome the atrocious pains which accompany the abrupt or gradual withdrawal of the drug. He asserts that in napelline we have a remarkable sedative for the nervous system which favors sleep. To obtain the best effects, the substitute is to be given hypodermically. It is readily soluble in distilled water. The dose employed is not definitely stated, but from the solutions employed it would seem as if about five grains had been given in a day. The author speaks of the feeble toxicity of the substitute, though in this he differs from other writers. Foster's *Handbook of Therapeutics*, says *Medicine*, states that napelline is almost identical in action with aconitine, but not so powerful, the dose being from one twentieth to one third of a grain.

A Draught for Premenstrual Pains.—The *Lyon médical* for May 21st quotes the following from the *Revue médicale*:

- R̄ Codeine ¾ grain;
Chloral 15 grains;
Bromide of ammonium 15 “
Camphorated water 450 “

M.

To be taken in one dose on going to bed.

The *Lyon médical* adds: “Before employing this remedy, which can not be an agreeable one, we advise practitioners to try antipyrine in a dose of from fifteen to thirty grains. We have seen greater relief follow this treatment even than that which follows the hypodermic injection of morphine.”

Sensitive Dentine.—The *Southern Clinic* for June quotes the following from the *Dental Brief*: “Dr. C. B. Rohland, of Illinois, says: ‘By adding just sufficient carbolic crystals to cocaine hydrochloride, and rubbing together with a spatula until the cocaine is dissolved, a thick syrup is obtained which is escharotic, antiseptic, obtundent. With this he often obtains most gratifying results in the treatment of sensitive dentine in cavities of decay. It should be used with the rubber dam, dryness to the verge of desiccation secured, applied warm, and treated *in situ* with the hot-air syringe, as hot as can be borne, and again dried before excavating. If the first application fails to give the desired result, a second will almost invariably prove effective.’”

A Prescription for Tapeworm in Children.—The *Clinica moderna* for May 10th attributes the following prescription to Sassy:

- R̄ Black oxide of copper 75 grains;
Prepared chalk, } each.. 15 “
Magnesium carbonate, }
Gum tragacanth 150 “
Glycerin 75 “
Sugar 600 “
Water a sufficiency.

M. Divide into fifty lozenges.

S. Two or three to be taken daily.

Syrup of Arsenate of Iron.—The *Riforma medica* for May 12th credits the following to Griggi:

- R̄ Arsenate of sodium 5 ½ grains;
Pure ferrous sulphate 4½ “
Citric acid 12 “
Distilled water 150 “
Syrup 14,850 “

M.

From two to six teaspoonfuls daily, before meals.

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CHOLERA INFANTUM AND THE NURSING BOTTLE.

THE perils that surround the bottle-fed baby are manifold. If a liquid reasonably resembling breast milk in composition and temperature is put into its bottle, it is still in danger of sucking in septic and possibly specific germs that have been lurking in the rubber appurtenances of the bottle. The abomination known as the Alexandra nursing bottle, that familiar device for saving the nurse-maid trouble, has commended itself to the unthinking for many years, and its use has even been upheld by some physicians who should have known better, although one would suppose that the dullest comprehension could not fail to perceive the impossibility of keeping it clean—clean in the ordinary sense of the word, not aseptic. Most physicians whose practice has been largely among children have, it is true, inveighed against it, but hardly any heed has been taken of their statements, perhaps because they were not clinched by indisputable demonstration. Such a demonstration seems now to have been made, and it is by no means the least of the services rendered by bacteriology. To Dr. Wendé, the health officer of Buffalo, so far as our present information goes, is due the credit of having proved the agency of the "hose" bottle in causing cholera infantum.

The flexible external tube of the Alexandra bottle, as everybody knows, is made of soft rubber, a material which speedily becomes foul when kept in contact with impure liquids or those that readily decompose. Dr. Wendé has shown that this tube, after having been in use for a little time, contains in the depths of the rubber, to say nothing of its inner surface, micro-organisms that even boiling does not destroy, as is proved by the ease with which cultures of them are grown. In consequence of Dr. Wendé's demonstration the Buffalo board of health some time ago passed an ordinance forbidding the sale of the "hose" nursing bottle, and during the year or more that this enactment has been in force the cholera infantum mortality of Buffalo has been fifty per cent. less than before.

But this is not all. The elimination of the "hose" does not, of course, do away with all the dangers of bottle-feeding. Not only has the baby to be guarded

against bad milk, but the micro-organisms lurking in soft rubber still pursue it. Dr. Wendé finds that even the rubber nipple used when the "hose" is dispensed with soon becomes a nest for bacteria; so that in time even that must go, although it will have to be used, we presume, until a less objectionable form of nipple is devised. Dr. Wendé finds that the nipples made of white rubber are more readily infected than the black ones; therefore, so long as rubber nipples still have to be employed, the black ones are to be preferred. What is wanted now is a nipple combining something of the elasticity of soft rubber with the germ-proof quality of glass. Celluloid has been suggested as a material that might be made to fulfill these requirements, and we see no reason why it should not if properly treated. Something must be invented to supersede the soft-rubber nipple.

SANITARY ICONOCLASM.

THIS is an iconoclastic age. Bit by bit, we see old faiths, old ideals, old traditions, old cherished beliefs crumble away. The emotions, which used to reign with unchallenged empire, it is now sought to control on sanitary principles. The loving cup becomes an abomination as a dispenser of disease. That heavenly first kiss, which poets have raved about and all young people have cherished as the ideal moment of their lives, is threatened with extinction as a conveyer of infection. "Wine that maketh glad the heart of man" is only a vile poison after all, to be shunned like the plague. Even the "cup that cheers but not inebriates" has within recent days killed a man, we are told, within the precincts of a New York hospital, and is ruining the digestion, and consequently the health, of its myriads, and producing a race of neurotics. The soothing influence of "sweet tobacco," that has refreshed the weary, calmed the excited, stayed the hunger of the explorer when food was not forthcoming, and stimulated the energies of the student "sicklied o'er with the pale cast of thought," is the offspring of a vile and filthy habit. Even the physical laws of Nature are all turned topsy-turvy. It is no longer true that we can not see in the dark. The X rays have made it approximately possible to see through a brick wall. Space and time are both reduced to trifling obstacles by the telegraph and the telephone. And so on *ad infinitum*.

We have always been accustomed to believe in the relative purity of a country over a city life. Dwelling houses in town have been deemed as breeding places of disease, and we have turned restful longings toward

the dear old country homes of earlier and more simple days. But even that ideal is now destined to be relegated to the limbo of exploded superstitions.

Dr. Harvey B. Bashore, in an able article in the *Sanitarian* for June 19th on Some Common Sources of Impurity in Country Houses, displays to us the unsuspected dangers that lurk within and without their hitherto sacred portals. While city houses are for the most part built on a comparatively dry and impervious foundation, in the country house "the usual method is to dig a hole the required size, wall this with stones and mortar, and on this erect the superstructure without any precautions being taken to favor 'dryness'; whence it follows that country houses have almost invariably damp cellars. The old privy befouling the soil is a worse sanitary sin than the kitchen sink, bath-room, and water-closet of its town congener. In country houses the soil outside the kitchen door becomes the usual sink, until it is sodden with filth and becomes a hotbed of putrefaction and a first-class bacteriological laboratory for disease germs. The old farmyard, with its cowsheds, chicken yards, and pigpens, is a standing menace to the whilom sturdiness of the rustic race. The midden or compost heap is a permanent danger, rendering the soil and atmosphere fouler than even those of cities. The village duck pond, with all its classic associations that have formed a subject for the picturesque treatment of the artist and the poet, is simply a stagnant pool, which can not really be beautiful, since beauty implies cleanliness and wholesomeness, two qualities conspicuously absent in this connection. The dear old well and the village pump, that gave such pure water in the days of our grandfathers as to afford no excuse for indulgence in alcoholic liquors, are now but disguised cesspools. Says the author:

"The allurements of the 'Old Homestead' seem very enticing on the stage or on canvas, but under the exacting eye of the sanitarian, with his increased angle of vision, 'things are not always what they seem.' The vine-clad porch, with its wistaria and fragrant honeysuckle, where 'mother used to sit,' resolves itself into a damp, musty, sunless nursery of 'the chronic rheumatism which made mother's life a burden.' The old well, with its 'pure, sweet water,' has become a vast test tube of colon bacillus at least, if none other; and the delightfully pure air, redolent with the perfume of flowers, has become an air surcharged with moisture reeking with the gases of decomposition, from a befouled soil and a cellar soil and air saturated with the moldy debris of decayed vegetables. Such is not rarely the true story of the 'Old Homestead.'"

The worst of it is that all this is really true. Long-

continued settlement in one spot in the country does befool the surroundings to an extent which offsets the old-time advantages of pure air and the absence of the exhalations that perforce accumulate in the cities, where man crowds together in masses suggestive of an enormous sardine box. Cooperation in the towns sets to work to minimize these evils of overcrowding by removal and disposal of sewage and other sanitary measures; while the erstwhile purity of the country home is becoming gradually more and more a fancy of the past.

Theoretically, the outdoor, uncrowded country life is far better than the sweltering existence of the city; but long-continued tenancy of one spot as surely though gradually diminishes the advantages, while the labor and cost of proper sanitation, which in the cities is reduced to a minimum burden on the individual, is to a large extent too much for the unaided country dweller.

The fact is, that the great virtues of the country are attained by two classes only: first, the nomad tribes that strike and repitch their camps as often as occasion requires, and, secondly, not the pioneers who break new ground—for that has dangers, malarial and otherwise, peculiar to itself—but their next succeeding generation; after which the "well-settled ground" begins to get progressively pernicious as a place of residence for each succeeding generation.

If these considerations have no other effect, they may serve to induce us to set off against the overcrowding of the cities the advantages for health rendered by the possibility of sanitary cooperation in the reduction of the evils occasioned by the waste products of humanity, personal or economic.

It is not, however, to be considered that nothing can be done to minimize these defects of the country house, and it is for State boards of health to aid in this matter.

MARRIAGE AMONG LEPERS.

IN our issue for May 27th, in an article entitled *The Alleged Contagiousness of Leprosy*, we cited Dr. Roger S. Chew's interpretation of Vertheil's plan of separating the sexes in leper settlements, to the effect that its purpose was to prevent the hereditary transmission of leprosy. We have since received a very interesting communication from Passed Assistant Surgeon E. P. Stone, of the navy, who acquaints us with some notes made by him last year on the occasion of a visit to the Molokai leper settlement in Hawaii. Dr. Stone learned from Dr. Oliver, the resident physician, and from Dr. Day, of the Hawaiian board of health,

that there were usually about a thousand lepers in the settlement and no segregation of the sexes was attempted. On the contrary, marriage was encouraged, as it was believed that lepers were generally barren. As a matter of fact, only about forty children have been born in the settlement during the last fifteen or sixteen years, and it is not believed there that leprosy is congenital, but rather that it is acquired after birth by accidental inoculation. Only ten per cent. of the children born in the settlement have become lepers. In Honolulu, Dr. Stone further informs us, there is a home for the non-leprous children of lepers, and when a child born in the leper settlement has attained the age of two or three years and is still free from the disease, it is taken to this home to be brought up, or is reared by its relatives in some other island. The board of health has thus been enabled to watch the growth and development of these children, and Dr. Stone is convinced that its opinions are solidly founded.

This is strong testimony and most gratifying in its purport, for we believe that marriage should never be discouraged, far less forbidden, save under very grave circumstances. Possibly Vertheuil had in view the prevention of illicit sexual relations rather than matrimony among lepers, for his observation to the effect that the sexual appetite is heightened in them is corroborated, Dr. Stone informs us, by what has been observed in the Molokai settlement. It is Dr. Stone's opinion that Kalaupapa, the site of the Molokai leper settlement, is ideally situated for quarantine purposes, and that the system of managing lepers carried out by the Hawaiian government is very nearly perfect. He adds the hope that, now that the islands have become part of our domain, there will be no disturbance of that system, and that eventually the lepers in the United States may be sent to Kalaupapa. For our part, we are convinced that the Hawaiian board of health is doing an excellent work in the matter of leprosy, and we fully indorse Dr. Stone's deprecation of interference with the board's system.

THE X RAYS IN THORACIC DIAGNOSIS.

THE increasing efficiency of the X rays in medical diagnosis is beautifully illustrated by an article on Some of the Medical Uses of the Röntgen Light, by Dr. Francis H. Williams, of Boston, published in the *American Journal of the Medical Sciences* for June. A series of six unusually clear skiagraphs is reproduced, representing the normal thorax in full inspiration, pleurisy with extensive effusion, pleurisy with slight effusion, pneumonia in the seventh day of the disease, pulmonary tuberculosis, and passive congestion or edema of the lungs. The aid rendered to clinical examination by these remarkably clear pictures is very great,

the outlines of the heart, the trachea, and cesophagus, the visible part of the aortic arch, the ribs, and the clavicle showing in marked contrast to the clear space of the normal lungs. The diseased portions of the lungs in the various pictures also show up well. These illustrations are among the best we have seen, and are convincing proof that it is only a question of time ere a large part of the field of medical pathology will lie as open to visual examination as is that of surgical pathology.

STREET-CAR EXCURSIONS FOR CHILDREN.

THE steamboat excursions which are provided for children in the Atlantic cities, and probably in those of the Pacific also, leave nothing to be desired except their multiplication. It is gratifying to observe that the inland cities are prodding by the trolley-car lines to give their children excursions little if at all less enjoyable than our aquatic outings and doubtless quite as beneficial from the point of view of health. Numbers of these excursions were to be seen in Columbus during the recent meeting of the American Medical Association.

PARALYSIS AGITANS FOLLOWING AN INJURY.

THE curious fact of the development of typical paralysis agitans as a sequel of fracture of the lower end of the radius is recorded by Dr. Köhler (*Monatsschrift für Unfallheilkunde*, 1899, No. 2; *Centralblatt für Chirurgie*, June 3d). The patient was a perfectly healthy man, sixty-one years old, of normal heredity, and living in easy circumstances. It is particularly stated that he was in no wise excited by the accident.

GENITO-CRURAL NEURALGIA.

PERSISTENT pain in the genito-crural nerve, often accompanied with tenderness on pressure over that portion of the spermatic cord that occupies the inguinal canal, may be the expression of any one of a number of lesions. Donath and Hutt (*Wiener klinische Wochenschrift*, 1899, No. 11; *Gazette hebdomadaire de médecine et de chirurgie*, May 21st) record the case of a young man in whom it followed gonorrhoea complicated with inflammation of the left epididymis. It was felt along the course of the left spermatic cord, and radiated toward the crest of the ilium. A portion of the genito-crural nerve rather more than two inches long was excised and found to be normal in structure. For two months there was complete absence of pain; then it recurred, but in reduced intensity, and was accompanied by augmented sexual desire and virile power. Finally the pain disappeared again almost completely.

THE ATHENIAN PLAGUE OF THE PÉLOPONNESIAN WAR.

THE plague described by Thucydides as afflicting the 200,000 men immured in Athens in the second year of the war, the year 430 B.C., has been made the subject of study by Dr W. Eberlein, who has published a pamphlet which is reviewed briefly by Dr Gumprecht, of Jena, in the *Centralblatt für innere Medizin* for June 3d. It seems that the disease was acute in its onset, with a sense of heat in the head and burning in the eyes, followed by lividity of the tongue and throat, foulness of the breath, snoring, hoarseness, and cough

or vomiting and hiccough. There were great restlessness and insomnia, and vesicles and ulcers formed on the skin. The victims usually succumbed in from seven to nine days. Those who recovered were apt to be affected with gangrene of the limbs. To the remark that the essential nature of the plague is uncertain is appended the following clever rendering of one of Hamlet's sayings: *Es giebt eben mehr Dinge im Himmel und auf Erden, als wir uns in unserer Schulweisheit träumen lassen*, but whether it is Elstein's, Gumprecht's, or some other writer's is not clear.

GASTRIC DISTURBANCES IN THE EARLY STAGE OF CONSUMPTION.

THE by-symptoms of pulmonary consumption are often more distressing to the patient and more taxing to the physician than the essential manifestations. Dr. W. Croner (*Deutsche medicinische Wochenschrift*, 1898; No. 48; *Centralblatt für innere Medizin*, May 20, 1899) divides the gastric symptoms into two groups, according as they appear before or after the pulmonary affection has frankly declared itself. He is unable to trace them to either gastritis or anæmia, and is content to term them functional disturbances. He thinks there is no reason to dread overfeeding in such cases.

THE ROULETTE OF PREGNANCY.

YET another method of making boys or girls at will! This time it comes from Greece. Dr. C. Nicolopoulos argues in the *Grèce médicale* for April that the right ovary produces males and the left females, and that the ovaries exercise their function alternately, the entire puerperal period being regarded as the equivalent of one menstrual period. Whence it follows that if a woman has given birth to a male child, the first and each following uneven menstruation will prove the time for impregnation if a female child is desired, while the second and subsequent even menstruations are the proper times to fecundate if a male child is desired. This process might be termed the roulette of pregnancy, but there will probably be an inordinate number of zeros to *pairs* and *impairs*.

A POINT IN TREPHINING FOR THE RELIEF OF PRESSURE.

It is sometimes desirable to prevent the formation of new bone after the operation of trephining. At a recent meeting of the Paris Academy of Medicine (*Journal des praticiens*, April 29th) M. Cornil gave it as the result of clinical observations by M. Chipault and experiments by M. Berezowski that the dura mater became the starting point of new bone after trephining, and advised removing a disc of it in cases in which the formation of new bone was objectionable.

DEEP RESPIRATIONS AS A PROPHYLACTIC IN HEPATIC COLIC.

M. MÖBIUS (*Nouveau Montpellier médical*, April 30th) has found that in a patient subject to attacks of hepatic colic he was able to avert the crises by "massage of the liver," as follows: "The patient is directed, on first warning of an attack, to take slowly as deep an inspiration as possible, lasting at least five seconds; the

breath is retained for from fifteen to thirty seconds more, and then a deep expiration, lasting from ten to fifteen seconds, is practised. This operation is repeated several times. During this process the liver is alternately depressed and elevated, this action constituting a sort of massage. M. Möbius considers that the absence of hepatic movements is the most common cause of cholelithiasis, which explains, in his opinion, its greater frequency among women, with their thoracic respiration and corset immobilization, than among men.

"NO TEMPERATURE."

Nor infrequently, in reading the manuscripts of esteemed and valued contributors, whose professional attainments are beyond question, we find the expression "no temperature" in the description of the condition of a patient. Now, temperature is a property of all matter, living or dead, organic or inorganic. As patients (when not fictitious) are quite material beings, they must have a temperature, and so must their remains after death. Possibly the shades of the good have "no temperature"; as for those of the bad, we shall have to consult a Presbyterian minister before expressing an opinion on the subject. However, what our contributors evidently mean is that their patients had no abnormally *high* temperature, and therefore in such cases we take the liberty of adding the qualifying adjective.

INCOMPATIBLES IN PRESCRIBING.

THE necessity of a knowledge of this subject to prescribers is very markedly emphasized by a fatal accident which is reported by the *Lancet* (February 11th and April 15th; *Medical and Surgical Review of Reviews*, May) to have happened at Johannesburg in the Transvaal—a qualified physician prescribing one ounce of "Liq. Ars." in combination with five drachms of "Liq. Strychn." Now, liquor arsenicalis is an alkaline solution, and the alkali would naturally precipitate the alkaloid. Consequently it is not a matter for wonder that at the end the patient got a fatal dose of strychnine in the half teaspoonful of the mixture and was seized with convulsions, which terminated fatally. The same prescription had been ordered many times previously without evil results; but the danger was there all the time, and should have been known and avoided. It is as necessary for the prescriber to carry a knowledge of dangerous incompatibles in his head as of the toxic doses of poisonous drugs, for the subject is not one of those things that can be relegated to the bookshelf to be looked up when required. It may prove to be too late when the necessity for looking it up is recognized.

ASTHMA SEXUALE.

DR. F. GRAHAM CROOKSHANK (*Edinburgh Medical Journal*, June) calls attention to Peyer's views that asthmas are not infrequently set up by morbid hyperæmias and catarrhs of the genito-urinary tract, which conditions are often caused in women by fibroids, subinvolution, etc., and in both sexes by masturbation and perverted sexual manifestations. Dr. Crookshank records cases bearing out this view, and concludes that a sexual origin should be suspected for asthma in the absence of bronchial, cardiac, gastro-intestinal, or nasal excitation: 1. In young neurasthenic men given to sex-

ual perversions or excess. 2. In middle-aged women the subjects of uterine catarrh from fibroids and other causes, particularly when single. 3. In young women and girls who have given way to sexual irregularities. Even in the insane, the so-called asthmatic insanity, the author's experience shows that there is often a sexual nusus. The physiological relation between the nasal passages and the genital organs has long been known, and also that between the nasal passages and the bronchi, and the points cited it is well to bear in mind in cases of asthma.

A POSSIBLE ADVANTAGE IN EARLY HYDRO-CEPHALUS.

DR. HANSEMAN, of Berlin (*Zeitschrift für Psychologie*, March 7th; *British Medical Journal*, May 13th), apparently agrees with Perls and Edinger that a certain amount of hydrocephalus in early life may prove of advantage to the intellectual development of the individual by enlarging the skull so that the brain may have room for unusual growth. His article is on the brain of von Helmholtz, who, like Cuvier, was somewhat hydrocephalic in his boyhood.

ITEMS.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported during the two weeks ending June 17, 1899:

DISEASES.	Week ending June 10.		Week ending June 17.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	12	3	18	6
Scarlet fever.....	183	19	136	13
Cerebro-spinal meningitis.....	0	12	0	14
Measles.....	422	30	375	16
Diphtheria.....	227	37	219	31
Croup.....	10	7	10	10
Tuberculosis.....	134	137	128	117
Small pox.....	6	3	3	2
Chicken pox.....	52	0	62	0

The New Camp Sanitarium at the Presidio.—According to the *Army and Navy Journal* for June 3d, orders have been issued directing Colonel Charles R. Greenleaf, assistant surgeon-general, to proceed to San Francisco, California, to assume direction of the sanitary arrangement of the new model camp to be established at the Presidio for troops returning from the Philippines. Colonel Greenleaf has pronounced ideas regarding the drainage of camps, and after his inspection of Camp Meade, Pennsylvania, has determined to follow to some extent the general plan of that camp. The kitchens and latrines will be far removed from each other, so that there will be no repetition of the conditions that existed at Camp Thomas, Chickamauga.

Death of Dr. Charpentier.—The death is announced from Paris, on May 29th, of Dr. Louis Alphonse Charpentier. Dr. Charpentier was a professor and fellow of the Faculty of Medicine of Paris and a member of the French Academy of Medicine.

"Neglect, Dropsy, and Christian Science" as Causes of Death.—According to the *Chicago Medical Recorder* for June, a "Christian Scientist" died a few days ago

in Mount Vernon, New York, after a three-months' illness, during which she persistently refused medical treatment. The coroner indorsed on the death certificate that she died "of neglect, dropsy, and Christian Science treatment."

Death of Dr. Sinclair Coghill.—The *Lancet* for June 10th announces the death, on June 5th, of Dr. J. G. Sinclair Coghill, an eminent member of the staff of the Royal National Hospital for Consumption. Dr. Coghill gave an address on the treatment of tuberculosis on May 26th at the International Congress in Berlin.

Marine-Hospital Service Health Reports.—The following cases of small-pox, yellow fever, cholera, plague, and leprosy were reported to the surgeon-general during the week ending June 17, 1899:

Small pox—United States.

Los Angeles, Cal.....	May 27-June 3.....	1 case.	1 death.
Washington, D. C.....	May 27-June 10.....	2 cases.	
Jacksonville, Fla.....	June 3-10.....	5 "	
Chicago, Ill.....	June 3-10.....	1 case.	
Evansville, Ind.....	June 3-10.....	3 cases.	
Emporia, Kan.....	May 24-31.....	6 "	
Morton County, Kan.....	May 1-31.....	12 "	3 deaths.
Louisville, Ky.....	June 3-10.....	5 "	
Baton Rouge, La.....	May 24-27.....	1 case.	
New Orleans, La.....	May 27-June 10.....	5 cases.	
Boston, Mass.....	June 3-10.....	2 "	1 death.
Chelsea, Mass.....	June 11.....	5 "	
Fall River, Mass.....	From outbreak to June 13.....	32 "	
Albany, Minn.....	June 3.....	1 "	
Inver Grove, Minn.....	June 3.....	1 case.	
Minneapolis, Minn.....	June 3.....	2 cases.	
St. Paul, Minn.....	June 3.....	1 case.	
St. Louis, Mo.....	June 5-12.....	5 cases.	
Omaha, Neb.....	May 27-June 3.....	1 case.	
New York, N. Y.....	June 3-10.....	2 "	3 deaths.
Massillon, Ohio.....	May 27-June 3.....	1 "	
Portland, Ore.....	June 17.....	1 "	
Pittsburgh, Pa.....	June 3-10.....	1 "	
Danville, Va.....	June 7-14.....	19 cases.	
Newport News, Va.....	June 8-14.....	None.	
Norfolk, Va.....	June 8-14.....	1 case.	
Portsmouth, Va.....	June 8-14.....	None.	
Seattle, Wash.....	May 26-June 2.....	1 case.	
Milwaukee, Wis.....	June 3-10.....	2 cases.	

Small pox—Foreign.

Serra Leone, Africa.....	May 1.....	10 cases.	
Antwerp, Belgium.....	May 29-27.....	2 "	4 deaths.
Bahia, Brazil.....	May 1-20.....	3 "	
Rio de Janeiro, Brazil.....	Apr 21-May 7.....	26 "	19 "
Hongkong, China.....	Apr 22-May 6.....	5 "	4 "
Cairo, Egypt.....	May 20.....	5 "	
London, England.....	May 1-27.....	2 "	
Bombay, India.....	Apr 29-May 30.....	12 "	
Calcutta, India.....	Apr 29-May 6.....	2 "	
Madras, India.....	May 6-17.....	1 death.	
Athens, Greece.....	May 20-27.....	21 "	6 deaths.
Nagasaki, Japan.....	May 9-16.....	1 case.	
Quahaba, Mexico.....	May 27-June 1.....	1 death.	
Mexico, Mexico.....	May 28-June 1.....	6 cases.	3 deaths.
Rotterdam, Netherlands.....	May 27-June 1.....	1 case.	
Moscow, Russia.....	May 6-10.....	4 cases.	10 "
Odesa, Russia.....	May 20-27.....	2 "	2 "
St. Petersburg, Russia.....	May 1-10.....	11 "	1 death.
Buenos Aires.....	May 1-10.....	2 "	
Montevideo, Uruguay.....	Apr 27-30.....	1 case.	

Small pox—United States.

New Orleans, La.....	May 1-June 1.....	1 case.	1 death.
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Yellow fever—Foreign.

Bahia, Brazil.....	Apr 21-May 20.....	218 cases.	65 deaths.
Rio de Janeiro, Brazil.....	Apr 21-May 5.....	93 "	59 "
Peruana, Colombia.....	Apr 20-June 3.....	4 "	1 death.
Yucatan, Mexico.....	June 4.....	1 case.	
Vera Cruz, Mexico.....	May 15-June 8.....		132 deaths.

Cholera.

Bombay, India.....	May 2-16.....	6 deaths.
Calcutta, India.....	Apr. 29-May 6.....	23 "

Plague.

Hongkong, China.....	Apr. 29-May 6.....	98 cases, 86 deaths.
Bombay, India.....	May 2-16.....	614 "
Calcutta, India.....	Apr. 29-May 6.....	85 "
Tamsui, Formosa, Japan...	Mar. 29-Apr. 12.....	476 " 353 "

One case of leprosy at Matanzas, Cuba, June 6.

The Sanitary Work in Cuba.—The Marine-Hospital Service reports from Havana, Matanzas, Santiago, including Daiquiri and Guantanamo (*Public Health Reports*, Washington, June 9th), are highly satisfactory, and clearly show the vast benefits accruing from the American occupation. There were no deaths from yellow fever, and in Havana the deaths from all causes were much less in the week ending May 25th than in the previous week.

Changes of Address.—Dr. A. Stella, to 371 Lexington Avenue, New York; Dr. Parker Syms, to No. 50 West Forty-seventh Street, New York; Dr. J. C. Wharton, from Jamaica, Long Island, to No. 162 West Ninety-third Street, New York.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the Week ending June 17, 1899:*

GUEST, M. S., Passed Assistant Surgeon. Detached from the *Detroit*, June 20th, and ordered home to await orders.

BRAISTED, W. C., Passed Assistant Surgeon. Ordered to the *Detroit*, June 20th.

MAGRUDER, A. F., Surgeon. Granted leave for four months, with permission to leave the United States.

GATEWOOD, J. D., Surgeon. Detached from the bureau of medicine and surgery and ordered to the *Lancaster*, June 22d.

LOVERING, P. A., Surgeon. Detached from the *Lancaster*, June 22d, and ordered home and to await orders.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending June 15, 1899:*

MURRAY, R. D., Surgeon. So much of bureau letter of May 15, 1899, directing Surgeon Murray to transfer property in his charge to Passed Assistant Surgeon W. J. S. STEWART revoked, and directed to defer departure to Key West, Florida, until the arrival of Surgeon W. P. MCINTOSH.

CARTER, H. R., Surgeon. To report at Washington, D. C., for special temporary duty.

BANKS, C. E., Surgeon. To proceed to New York for special temporary duty.

PECKHAM, C. T., Surgeon. To proceed to Sabine Pass, Texas, for special temporary duty.

BROOKS, S. D., Surgeon. Granted leave of absence for fourteen days. Upon expiration of the leave of absence granted by bureau telegram of June 12, 1899, to proceed to Portland, Maine, and assume command of the service.

MCINTOSH, W. P., Surgeon. Upon being relieved from duty at Louisville, Kentucky, to proceed to Mobile, Alabama, and assume command of the service.

WHITENBAKER, C. P., Passed Assistant Surgeon. Granted leave of absence for six days.

STEWART, W. J. S., Passed Assistant Surgeon. Bureau letter of May 15, 1899, directing Passed Assistant Surgeon STEWART to assume command of the service at Mobile, Alabama, revoked.

GREENE, J. B., Assistant Surgeon. Relieved from duty at San Francisco, California, and directed to proceed to Boston, Massachusetts, and report to medical officer in command for duty and assignment to quarters.

McMULLEN, JOHN, Assistant Surgeon. Upon being relieved of temporary command of the service at Portland, Maine, to proceed to Louisville, Kentucky, and assume command of the service.

ROBINSON, D. E., Assistant Surgeon. Granted leave of absence for three days (paragraph 181, Regulations, Marine-Hospital Service).

ULRICH, C. E., Acting Assistant Surgeon. Granted leave of absence for twenty-six days from June 5, 1899.

PECK, F. H., Hospital Steward. Bureau letter of March 15, 1899, directing Hospital Steward Peck to proceed to the Tortugas Quarantine Station for duty revoked.

RYDER, L. W., Hospital Steward. Granted leave of absence for fourteen days from June 15, 1899.

CARLTON, C. G., Hospital Steward. Relieved from duty at Egmont Key (Florida) Detention Camp and directed to proceed to New Orleans, Louisiana, and report to the medical officer in command for duty and assignment to quarters.

BECK, J. E., Hospital Steward. Relieved from duty at New Orleans, Louisiana, and directed to proceed to Mobile, Alabama, and report to the medical officer in command at that port for duty and assignment to quarters.

Appointments.

LINLEY, W. J., of Georgia, appointed Acting Assistant Surgeon, United States Marine-Hospital Service, for duty at the Savannah (Georgia) Quarantine Station.

LIPPITT, W. H., of North Carolina, appointed Acting Assistant Surgeon, United States Marine-Hospital Service, for duty at Wilmington, North Carolina.

Boards Convened.

Board convened to meet at the United States Marine Hospital, Stapleton, Staten Island, New York, at ten o'clock A. M., Tuesday, June 13, 1899, for the physical examination of an applicant for appointment as third lieutenant in the Revenue-Cutter Service. Detail for the board: STONER, G. W., Surgeon, chairman; HOBBS, W. C., Assistant Surgeon, recorder.

Board convened to meet at New York, at ten o'clock A. M., on Tuesday, June 27, 1899, for the purpose of examining candidates for appointment as assistant surgeon in the service. Detail for the board: STONER, G. W., chairman; BANKS, C. E., Surgeon; WILLIAMS, L. L., Surgeon, recorder.

Society Meetings for the Coming Week:

MONDAY, June 26th: Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, June 27th: Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Rome, New York, Medical Society; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, June 28th: New York Pathological Society; American Microscopical Society of the City of New York; Auburn, New York, City Medical Association; Berkshire, Massachusetts. District Medical Society (Pittsfield); Philadelphia County Medical Society.

Births, Marriages, and Deaths.

Born.

ATKINSON.—In Baltimore, on Monday, May 29th, to Dr. and Mrs. Albert S. Atkinson, a son.

Married.

CHASSAIGNAC — MORRIS. — In New Orleans, on Wednesday, June 7th, Dr. Charles L. Chassignac and Miss Jennie Morris.

ELLIOTT — BUIST. — In Spartanburg, South Carolina, on Monday, June 5th, Mr. Samuel Tilden Elliott and Miss Constance Somers Buist, daughter of Dr. John Somers Buist, of Charleston, South Carolina.

GOULD — MEADE. — In Medina, New York, on Wednesday, June 14th, Dr. Richard J. Gould, of Buffalo, and Miss Althea Meade.

GUILD — STONE. — In Waltham, Massachusetts, on Monday, May 29th, Dr. Edward Frank Guild, of Chelsea, Massachusetts, and Miss Nannie E. Stone.

HULL — OSTRANDER. — In Lansingburgh, New York, on Thursday, June 1st, Dr. Harry F. Hull, of Proctorsville, Vermont, and Miss Mildred M. Ostrander.

KAINES — WOLCOTT. — In Lykens, Pennsylvania, on Thursday, June 15th, Dr. Arthur Wiley Kaines and Miss Vida Blanche Wolcott.

MILLS — FELL. — In Buffalo, on Thursday, June 15th, Mr. Irving Judson Mills and Miss Grace Argo Fell, daughter of Dr. George Edward Fell.

SAVAGE — ALEXANDER. — In St. Augustine, Florida, on Thursday, June 1st, Mr. Henry Savage and Miss Helen L. Alexander, daughter of Dr. L. Alexander.

SLONINSKY — SHENKIN. — In Philadelphia, on Thursday, June 15th, Dr. George Sloninsky and Miss Pauline Shenkin.

Died.

BAYLIES. — In Taunton, Massachusetts, on Thursday, June 1st, Adeline Baylies, daughter of Dr. Alfred Baylies.

MILLS. — In Medford, Massachusetts, on Monday, June 5th, Hermon Franklin Mills, only son of Dr. George W. Mills.

Letters to the Editor.

BEN KING'S VERSE.

UNIVERSITY HEIGHTS, June 17, 1899.

To the Editor of the *New York Medical Journal*:

SIR: On page 824 of your last issue you refer to the unacknowledged clipping habit. I am therefore confident that you will welcome more complete information as to the authorship of the lines which you print on your last page To a Delinquent Patient.

The verses have reached you in a roundabout way, and evidently proper credit was not given in the journals from which you clipped.

Last year there appeared a modest volume entitled *Ben King's Verse*.* The verses To a Delinquent Patient appear on the first page under the title If I Should Die. These lines are a fair sample of the humor and human nature that characterize all of Ben King's verse, and invite one to peruse the volume further.

I offer this correction for the very reason that Ben King, a "Thomas Hood from Michigan," to quote Opie Read's biographical sketch, lived and sung almost unknown, and died a sudden and untimely death in 1894, without recognition. Since his death his verse has been collected and published in the little volume referred to. He wrote the poet's lament that "there was nothing to eat but food," Jane Jones, S'posin', and many other equally clever things, many of which have become almost so popular as to rank as slang, while yet Ben King was unknown.

Let us at least give just due to the dead.

WILLIAM J. GREANELLE, M. D.

MEASLES IN SCHOOL CHILDREN.

27 WEST ONE HUNDRED AND FIFTEENTH STREET,
NEW YORK, June 14, 1899.

To the Editor of the *New York Medical Journal*:

SIR: Probably the most important point in connection with "Koplik's spots" is the possibility of making an early diagnosis in hospitals, asylums, and schools. In such places the cases can be immediately isolated, and the spread of the disease prevented.

As medical school inspector, I have recently had an opportunity to demonstrate the value of this sign. In each of two classes a pupil took measles on the 8th of May. From that time I examined regularly in both these classes all those pupils who had come in immediate contact ("chums") and all those who had not already had an attack of measles. On the 16th two pupils, on the 17th two pupils, and on the 18th one pupil showed the characteristic spots on the buccal mucous membrane. These pupils, together with their brothers and sisters, were immediately excluded.

The patients presented a beginning eruption on the body in from twenty-four to forty-eight hours after the diagnosis was made.

On the 30th one more case occurred in another class. This class was then examined in the same way. Up to the present time there have been no more cases.

I think there can be no doubt that had the cases not been isolated so early, the spread of the disease would have been much greater.

I have lately seen a set of cases in which this sign was of assistance in excluding measles. During the warm weather a number of children presented a heat eruption, which to the unpractised eye might be mistaken for that of measles, especially in those cases in which it is limited to the face, the neck, and the skin behind the ears. In some cases conjunctivitis and bronchitis are also present.

I saw a case of this kind a short time ago in which a very experienced physician diagnosed measles. From the absence of Koplik's spots, I concluded that it was not. A few days later I saw the child. It did not have measles.

* Check, 1898, p. 100.

While on the subject of measles, I should like to say that I believe the spread of this disease could in many cases be prevented. A number of cases have come to my knowledge in which the health department has not been notified, either through neglect of the physician, or because the family had none.

Often in such cases the remaining children of the family are allowed to play with other children in the streets, or they are allowed to go to school.

A few days ago I saw a case in point. One child in the family had a rather severe attack of measles. As I came in, I found the little sister of the patient in the vestibule below, surrounded by a dozen of her friends from the block. Another child of the same family was attending school. The mother begged me not to report the case, as the child was in the grammar school and would not be promoted if she remained away from school. C. HERRMAN, M. D.

Special Articles.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

By ARTHUR N. TAYLOR, LL. B.

XXIV.

CIVIL MALPRACTICE, INCLUDING GENERAL LIABILITY OF PHYSICIAN TO PATIENT.

Purpose of the Chapter.—The purpose of this chapter is to make a careful examination of the law governing the civil liability of physicians and surgeons, illustrating its application by particular instances and cases as fully as the limit of the work will permit. The examination will extend through the subject of civil malpractice, and will also include those instances of civil liability arising from acts either of omission or of commission which do not amount to malpractice.

No Liability for Refusal to take a Case.—In some localities there is a popular belief that a physician, by reason of the rights and privileges which he enjoys as such, is bound to undertake the treatment of any patient who requests from him professional services. There is in the law no foundation whatever for this belief. A well-known law writer, in referring to the subject, says: "No question can exist as to the legal right of a physician, unless he be an officer of the government charged with specific duties, which he thereby violates, to decline to take charge of a particular case."* But having once assumed charge of a case, we have observed in a preceding chapter,† he immediately sets in operation numerous implied contracts and presumptions of law regarding his qualifications to properly treat that case, and should he fail to fulfill these implied contracts, or comply with the presumptions of law, a civil liability immediately arises in favor of the patient to the amount of damages thereby sustained.

General Professional Requirements.—Perhaps the most fundamental of the professional requirements that we have heretofore observed are that one who undertakes to render medical services, holding himself out as a physician or surgeon, will be held by the law, first, to possess a reasonable degree of knowledge, skill, and

experience; second, to exercise ordinary care and diligence; and third, to use his best judgment in all cases of doubt as to the best course of treatment.*

Application of Rule.—Whether or not the amount of knowledge displayed or the degree of skill, care, and judgment exercised is sufficient in any case to fulfill the requirements of the law is a question of fact for the jury to determine from the evidence produced at the trial. To illustrate the application of the rule we will, as in previous chapters, examine the records of a few prominent trials. In the case of *Boldt vs. Murray*† the patient was suffering with a fracture of the inner condyle of the humerus. The evidence does not tend to show that the bone was not properly set. The evidence of the plaintiff was to the effect that the bandage was not put on the arm in the approved manner, but was rolled from the upper to the lower part of the arm, and so tightly as to prevent circulation, and that, although the hand and arm became swollen and the latter discolored, the bandage was left on; and that, by reason of the improper bandaging and the permitting of the bandage and splints to remain on in such condition, the circulation of blood was cut off, and, as a consequence, the flesh of the arm, being deprived of sustenance, sloughed off. The physician, on the other hand, gave evidence to the effect that the arm was properly bandaged, and that the unfortunate result of the injury was caused by the failure of the patient and his parents to obey the physician's directions, etc. Here was a case of direct conflict of evidence from which it was the province of the jury to determine the real facts. The court instructed the jury upon the law applicable to the case, as set forth in the above rule, whereupon they retired and found a verdict for the plaintiff, evidently believing the evidence given by the plaintiff and disregarding that given by the defendant. The judgment based upon this verdict the general term of the supreme court refused to reverse, stating in effect that the evidence of the plaintiff, if true, was sufficient to show that the defendant did not come within the legal requirements as to knowledge, care, and judgment, and that as to the truth of such evidence the jury was the only judge.

In the case of *Link vs. Sheldon*‡ *et al.*, the plaintiff, a lad of thirteen years of age, had fallen, striking with such force upon his hand and forearm as to produce a Colles's fracture and a dislocation of the ulna. The defendants were called and dressed the arm, placing a certain metallic splint, which should have been adjusted to the palmar surface of the hand, upon its back. The plaintiff's evidence was to the effect that the bandaging of the hand and arm had been so tight as to cause an inflammation and resultant suppurative, which in healing drew in the thumb and permanently deformed the hand.

The accident took place on Friday. It appears that the patient's parents became dissatisfied with the defendants' treatment of the case, and, hearing of the success of another doctor, employed him and dismissed the defendants on the following Tuesday morning, and that the defendants had nothing further to do with the case.

The evidence adduced by the defendants was to the effect that the injury was not an ordinary Colles's frac-

* *Leighton vs. Sargent*, 27 N. H., 469; *McNevin vs. Lowe*, 40 Ill., 209; *Long vs. Morrison*, 14 Ind., 595; *Brammer vs. Stormont* *et al.*, 9 Kan., 51; *Patterson vs. Wiggins*, 51 Me., 594; *Wood vs. Clapp*, 4 Sued., 65; *Ritchey vs. West*, 23 Ill., 385.

† *Boldt vs. Murray*, 2 N. Y. S. R., 232

‡ *Link vs. Sheldon*, 136 N. Y., 1.

* *Wharton on Negligence*, § 761.

† See *N. Y. Med. Jour.*, Feb. 18, p. 241 *et seq.*, and Feb. 25, p. 279 *et seq.*

ture, but that the position of the bones was so reversed that the splint had to be used as applied by them; that the physical condition of the patient, in addition, was bad from feverishness; that the bandages were rightly adjusted; that the great inflammation discovered when the doctor who succeeded to the case was called in was due to their having been prevented by the parents from redressing the arm on Monday evening, as they desired to do; and, finally, that had the succeeding physician properly treated the hand in its inflamed and swollen condition by lancing instead of poulticing, no distorted condition of the hand would have resulted.

The jury returned a verdict for the plaintiff to the amount of four thousand dollars. The court of appeals, in refusing to reverse the judgment, said: "The evidence upon the material points was conflicting. There was more or less disagreement among the doctors; but it is impossible to say that there was not evidence tending to establish a lack of skill, or some neglect, on the part of the defendants. It was not necessary, in order to sustain the action, that there should have been proof of gross culpability upon the part of the defendants. It was sufficient to warrant a verdict against them that there was evidence of any failure on their part to exercise proper care, or of any neglect in the discharge of the duty they had assumed toward the plaintiff."

While the legal effect upon the liability of the defendants, from dismissing them at an early stage in the treatment of the case and employing another physician, is not pertinent to the question now in consideration, it is perhaps of sufficient interest to justify digressing. The liability of the defendants in such a case extends not only to injuries directly resulting from the ignorant, unskillful, or negligent treatment to which they have subjected the patient previous to the time of their discharge, but they are liable as well for all injuries directly resulting from such improper treatment, even though they are not manifest until after the case has passed to the care of another physician. If, however, such injuries are the result of any other cause than that of the improper treatment of the defendants, they are not liable therefor. Upon this point the trial judge charged that "if the jury find, from the evidence, that it is just as probable that the injury complained of was caused either by the original severe injury, or by the interference of the plaintiff's parents (in refusing to allow the defendants to redress the arm), or by the subsequent manipulations and treatment of Dr. — (who succeeded defendants in the treatment of the case) and others, as from the pretended tight bandaging, it is the duty of the jury to find a verdict for the defendants." This instruction was held by the court of appeals to properly state the law.

After laying down the general rule requiring a reasonable degree of competency, care, and judgment, the court, in commenting upon the evidence in the case of *Ritchey vs. West*,* said: "The concurring evidence of all of the physicians shows that the splints and bandages were not properly applied. Had they extended below the wrist, the evidence seems to show that they would have confined the wrist to its proper place. It is probable that such a practice would have tended, notwithstanding the fracture, to have held the broken bone more nearly to its place until a union was formed, and thus have prevented to some extent, if not altogether, the deformity and disability to use the hand. The physicians

also agree that the splints employed were not of sufficient width, as well as too short, for the treatment of the fracture, even if they had been midway between the wrist and elbow, as he supposed. And from this evidence it would seem that there must have been a want of ordinary skill, or great negligence, in the treatment of the case, in not detecting the dislocation of the wrist joint. The physicians all agree that this portion of the injury could have been easily detected by ordinary care and skill, and the fact that it had been and was still dislocated was afterward detected by a person who did not profess surgery or skill in such matters, and had previously had only slight experience in cases of fractured limbs. Then, if the evidence of the medical men who were examined as witnesses is to be credited, and it is supported by the fact that the dislocation of the joint was detected by a person professing to have no skill, there was a want of ordinary care or skill, or both, manifested in the treatment of the case."

Failure to Discover Extent of Injury.—It must not, however, be inferred from the preceding case that the failure of the surgeon to discover a serious injury is a fact from which incompetency or negligence will necessarily be inferred. This is well illustrated by the case of *Godney vs. Kingsley*.* In this case the patient was thrown from her carriage and sustained a fracture of her right arm. The defendant, a physician, was called and made an examination, but did not discover the nature of the injury, and supposed it to be no more than a bad bruise. Upon the second visit he informed the patient that her arm needed further attention, but she thought she was getting on toward recovery, and said that she would send for him if she needed him further. The arm became very greatly swollen, and it was finally discovered that one of the bones was fractured. By reason of the delay in discovering the fracture the injury became in a measure irreparable. As usual, the parties differed in their remembrance of the facts. A physician who had examined the arm before the defendant, supported the defendant in his statement that the extent of the swelling prevented an examination which was needed to discover the fracture. The medical experts also differed upon the question whether a skillful surgeon ought to have discovered the fracture, but all agreed that the swelling should have been reduced; but, as to this, the court very properly expressed the opinion that if the patient prevented that by directing the physician to make no more calls until he was notified, he could not be blamed for omission to diligently look after the case. The jury found that the arm was so swollen that a complete assurance of the extent of the injury could not be made from a careful and skillful examination, and that the swelling was suffered to continue because the physician was told to wait until he was sent for to attend further. They consequently exonerated the defendant.

(To be continued.)

Pith of Current Literature.

The Cause of the Reappearance of Pediculi Corporis. Dr. Allan Jamieson (*British Journal of Dermatology*, May) refers to the fact that in spite of all pre-

* *Ritchey vs. West*, 23 Ill. 385.

* *Godney vs. Kingsley*, 41 N. Y. S. R. 794, 16 N. Y. Supp. 792.

cautions as regards the boiling of clothing and the local applications of disinfectants to the skin, it is no uncommon thing for a recurrence of pediculi to take place after an apparent cure has been effected. The complaint, annoying though it is, is not one to admit of the constant supervision of the physician, and consequently proper investigations have hitherto been very difficult. Dr. Jamieson says that an old woman infested with these parasites was admitted recently to his ward in the Royal Infirmary, solely that she might be rid of pediculi, her friends promising that were she taken in and returned to them freed from the pest they would do their best to keep her clean in future. Every stitch of her clothes was at once removed and fresh linen put on. She had several carbolic baths. A careful examination of her skin was then made, and he found that attached to the minute lanugo hairs still remaining here and there on her back, and especially on her shoulders, were the ova of the pediculus. This, he says, accounts for the intractable nature of the complaint and its constant tendency to recur. The clothes in such cases may have been entirely replaced by fresh ones, and the patient washed, yet some of the ova clinging to the hairs, possibly in out-of-the-way localities, have retained their vitality, and no sooner are precautions relaxed, and the previous careless habits returned to, than these hatch and the pediculi reappear. It would seem, then, says Dr. Jamieson, that—the opinions of Besnier and Doyon, so strongly expressed, notwithstanding—those physicians are right in principle who recommend that patients affected with *Pediculi vestimentorum* should have baths of corrosive sublimate, or be treated with mercurial fumigations, though the reason why has not hitherto been supplied. A better plan is to rub paraffin over the whole body, and then give a warm carbolic-acid bath. The rationale of the suggestion already made by the author, that such patients should wear for a time porous bags containing fragments of sulphur next the skin night and day, is now explained. It is clear that even if one or two ova attached to the lanugo hairs escape destruction, the insects will in time assuredly reappear. The term *Pediculus corporis* he considers, on the whole, preferable to *Pediculus vestimentorum*.

Medicine in Mesopotamia.—From the *Lancet* for June 3d we learn that Dr. Christopher Johnston, an American student of the cuneiform inscriptions, has unearthed and translated some evidences of the medical conditions in Babylonia. There are several communications from physicians in Assurbanipal's library relating to sufferers from what appears to have been facial erysipelas, epistaxis, and other complaints. Arad-nana and Iqisa-Aphi would appear to have been physicians of note.

Cannabis Indica in Excessive Menstruation.—The *Port Wayne Medical Journal-Magazine* for May quotes from the *Therapist* the following: While the curette is the ideal instrument for attacking excessive menstrual flow, there remain a number of cases that will not permit operation, and others in which the trouble is entirely one of functional derangement. In such cases, especially where the exciting cause is an irritation arising in the Fallopian tubes or in the ovaries, ten- to fifteen drop doses of tincture of cannabis indica, given every three or four hours, are often curative. The administration should be commenced a few hours after the flow sets in, say from twelve to eighteen hours

after, and be continued until its effect is produced or the symptoms abate. Much will depend upon the character and purity of the product used as to the amount of benefit received. Upon this the *Journal-Magazine* remarks: A word of caution as to the use of cannabis indica may not be amiss, for it must not be forgotten that this drug is one of the most treacherous in the entire pharmacopœia. This is perhaps true largely owing to the difference in character and strength of the various preparations that are found upon the market. No preparation except one of recognized strength, as determined by physiological tests, should be employed.

The Dangers of Erythrol Tetranitrate.—An accident, by which a chemist lost his life, is reported by Colonel A. Ford, her Majesty's chief inspector of explosives (*Medical Press and Circular*, March 29th; *Medical and Surgical Review of Reviews*, May), to have happened at a tabloid factory at Dartford, on December 15, 1897. He was engaged in mixing tetranitrate of erythrol with finely powdered lactose in a mortar when an explosion occurred.

Tetranitrate of erythrol is explosive, and is more highly sensitive to percussion than dynamite or gun cotton. As it has lately come into some use in the place of nitroglycerin as a remedy for angina pectoris, the writer draws special attention to the dangers of handling this drug.

Endocarditis of Tonsillar Origin.—At a recent meeting of the Association of American Physicians, Dr. F. A. Packard (*Boston Medical and Surgical Journal*, May 25th) reported five cases of endocarditis all of which had been preceded by an attack of amygdalitis. The minutiae of the physical signs were detailed to insure the correctness of the diagnosis of endocarditis. In two of the cases it was certain that prior to the attack of amygdalitis the hearts had been sound, and it was presumable that such was also the case in the other instances. Mention was made of the frequency of such cases, and also of the occurrence of other members of the so-called "rheumatic series" after amygdalitis. It was stated that such amygdalitis and endocarditis are not rheumatic, but that the endocarditis is rather due to an infection by bacteria gaining access to the body through the tonsils, or to the toxins of such bacteria. Dr. James Tyson spoke of the frequency of nephritis originating in an attack of amygdalitis. Dr. W. S. Thayer, of Baltimore, stated that the fact that the tonsils may serve as the portal of entry for severe general infections is well illustrated by a case of acute fatal streptococcus infection that he had observed. Dr. W. S. Thomson cited a case of suppurative amygdalitis followed the day after rupture of the abscess by pleuritis, pericarditis, ulcerative endocarditis, ecchymotic spots, and death on the seventh day.

Sir F. Seymour Haden on the Other Side of the Germ Question.—Sir F. Seymour Haden, F. R. C. S., in the Milroy lecture on Proper and Improper Burial, has this to say about a side of the germ question which is in danger of being lost sight of. He refers in conclusion to another thing which has amounted to a profession of faith with him for many years, and which he observes has not escaped the acumen of Dr. Poore—the recognition of the inherent power of the individual to resist against the heaviest odds the convection of disease—a power evidently immeasurably greater than that

either of the *soi-disant* omnipresent microbe or of the artificial bacillus, however carefully it may be cultivated. He can not but think, with every respect for the praiseworthy efforts of the bacteriologist to track the morbid particle to its lair, and to master it there with its own weapons, that room still exists for a larger faith in those provisions of Nature for our individual protection than we are altogether willing to accord to them. If it is really a fact that, with every drop we drink and every mouthful we eat, we are taking in enough of the active principle of disease to destroy a regiment, and that, notwithstanding, we not only escape infection but are perpetually diminishing the zymotic death-rate, he finds himself, with Dr. Poore, obliged to accord a far greater value to this beneficent endowment of personal immunity than is commonly conceded to it.

The Pathological Appearances of Death from Lightning Stroke.—Bauer (*Münchener medizinische Wochenschrift*, No. 3, 1899; *Clinica moderna*, April 19th) relates the case of a man, twenty-five years of age, killed by lightning. At the autopsy were found a brown coloration of the blood, which had lost its tendency to coagulate, colored macule and burns upon the superficial cutaneous layers, anæmia of the brain, meningeal hæmorrhage, injection of the intestinal coils, and hyperæmia of the spleen.

The Difference in Effect between Criminal Abortion and Spontaneous Miscarriage.—Dr. Josephine L. Peavey (*Woman's Medical Journal*, June), in a paper read before the Denver Clinical Society, says that the after effects produced by a criminal abortion are far more serious than those of a spontaneous or accidental miscarriage, for in the latter, after the death of the fetus, a period intervenes before its expulsion, and the placenta undergoes fatty degeneration as at term, but in the former the fetus is forcibly separated from the uterus and there is usually imperfect delivery of the placenta and membranes, which may be followed by septic peritonitis and septicaemia. Displacements, diseased ovaries and tubes, metrorrhagia, and menorrhagia are a few of the evils which follow abortions, while to the dirty instruments and lack of care by the abortionist may be laid many a death.

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

Meeting of March 8, 1899.

The President, Dr. WILLIAM L. STOWELL, in the Chair.

Anæsthetic Leprosy.—Dr. GEORGE THOMAS JACKSON presented the case of a man, twenty-two years of age, who had suffered from the disease eight years. Dr. Jackson said that up to his thirteenth or fourteenth year the patient had lived in Battle, Montana. He came of healthy Irish parentage, and did not know where he had contracted the disease. For some years he had wandered about the country, but, as it usually took some years after infection for the disease to appear, he had probably been infected in child-

hood while living in Montana. The case was interesting for several reasons. In the first place, it was one of the rare cases of the disease developing in this country. In the second place, there had been no trouble with the mucous membrane of the nose, where the disease was apt first to show itself. In the third place, its lesions were not symmetrical. Generally there was a well-marked deformity of both hands; in this case only the right hand was markedly affected, while the disease was just beginning in the left hand. Instead of patches of a brownish color, there were rings, one ring extending from below the shoulder blades down to the buttocks. It looked like a huge ringworm with its scaly border. Anæsthesia had been found in limited areas. In many places the skin was hyperæsthetic. The ulna never could be felt more distinctly on the left than on the right side. The opportunity of seeing the patient was due to the courtesy of Dr. W. B. James.

Dr. A. E. GALLANT (by invitation) asked if the deformity of the hand partook of the nature of Dupuytren's contraction, or was a part of the present disease.

Dr. W. L. CAHEN asked as to the treatment of the disease.

Dr. JACKSON said that the deformity of the hand was characteristic of the disease. It was due to the atrophy of the interosseous muscles and of the skin. As to the prognosis, it was good in this part of the world, where the disease did not thrive. The patient should be encouraged to take a hopeful view of the case, and be placed under the best possible hygienic conditions. As to drugs, most reliance was to be placed upon chaulmoogra oil, nuxvomica, and iodoquin.

Some Observations upon the Surgical Anatomy of the Gall Bladder and Ducts.—Dr. GEORGE E. BREWER read a paper on this subject.

The writer presented a report of a hundred regional dissections made at the anatomical laboratory of Columbia University during the past eighteen months.

In these dissections he had noted the position of the gall bladder, its size, its method of peritoneal attachment to the liver, duodenum, or colon, and the presence of calculous disease or other pathological conditions. The cystic and common ducts were carefully measured, the permeability of the former ascertained, and the position of the duodenal orifice of the latter determined.

A constant fold of mucous membrane at the junction of the first and second portions of the duodenum was described by the writer. For this he proposed the name of the *falciform process* of the duodenal mucous membrane. It was found to have a fairly constant relationship to the duodenal orifice of the common duct, and could be relied upon as a valuable landmark when searching for the papilla during surgical operations in this region.

As a result of a number of dissections, the writer described certain external landmarks by which the position of the lower intercostal nerves could be readily located and avoided in incisions made for the purpose of exploring these organs.

A number of drawings were shown, illustrating the normal relations of the various structures, as well as certain vascular abnormalities.

The writer stated that the report was only a preliminary one, that the next treatise would be continued, and a complete report made at a later date.

At the close of his paper, Dr. Brewer exhibited several plates, showing the normal position of the gall ducts, hepatic artery, and portal vein, and also a num-

ber of variations from the normal in the origin and distribution of the hepatic and cystic arteries. He stated that in a series of dissections which he was making with reference to this point, he had found that in less than half the subjects examined did the hepatic artery correspond with the description found in text-books of anatomy. In his opinion, more variation was found here than in any other artery of the body.

The Symptoms of Gallstones.—Dr. W. L. BAXER read a paper on this subject.

The Diagnostic Value of the X Ray.—Dr. H. H. HAGAN said that some fourteen months ago he had a disputed case of what was supposed to be gallstones, and had invested in one of those induction coils for diagnostic purposes. He had exposed the patient and could not find the gallstone, but was well convinced that there was a gallstone there, and resorted to other means to find out what an X ray would do. He had taken a number of gallstones, six or seven, and had tried them, without placing the tissue, just as they were, and they would cast a little shadow, hardly as much as the flesh around the bone. He had imbedded them in tissue and they did not show at all. He had one stone given him by Dr. Burchell, who had taken it from a gall bladder while an interne in Bellevue Hospital. It was about as large as a pigeon's egg. That, being imbedded in hepatic tissue, had made a decided shadow. It had never occurred to him to break it into small pieces and expose it in that way, but probably it had contained a great deal more lime, instead of cholesterin. He did not think cholesterin would obstruct the light at all, but lime would, and practically the X ray had no value at all in gallstones.

Medical Treatment.—Dr. W. L. CARR read a paper on this subject. (See page 564.)

Surgical Treatment.—Dr. CARTER S. COLE read a paper on this subject. (See page 566.)

The PRESIDENT thought that the speakers had presented a number of phases of the subject, and some which were not entirely old. Certainly the surgical anatomy and anomalous conditions were quite new, and Dr. Hagan's experiments with the X ray, while negative, were valuable, showing how little one could depend on the X ray. In treatment, both surgical and medical, various suggestions had been made, and the general discussion of the subject had covered almost all except the aetiology. He believed that a large number of the cases were due to catarrhal affections of the ducts, which were caused by the great number and variety of germs there. He thought it would be interesting to know if those present had tried to treat patients in the intervals between the attacks, and had given them antisepsics to cure the catarrhal condition of the bladder and prevent the germs from thriving.

Dr. J. B. BISSELL said that the surgical part of the symposium had been gone over so thoroughly by Dr. Cole that there was not much to add. It seemed to him there were two or three interesting points that might be brought out from a surgeon's standpoint. The first was the indications for operation; and the second point, the immediate treatment of the wound following the operation. The indications for surgical interference were principally symptoms of absolute obstruction, acute suppurative, and long-continued jaundice; probably these three points would lead most surgeons to interfere. The interesting part of the immediate after-treatment was what to do with the wound after opening the gall bladder. Dr. Tait had left it open and drained in

over fifty of his cases; Elliott, who reported five cases in which he had operated personally, had sewed the bladder up, replaced it, and stitched up the wound of the abdominal wall. In the three cases that the speaker personally had had anything to do with, the edge of the open duct and bladder had been sewed to the wound and allowed to drain, the cavity having been packed with gauze. He thought this method would be preferable, because there were usually a number of stones in the duct; there was also a condition producing these stones, and the longer the duct was allowed to remain open the more likely were we to relieve the condition and get the stones out. He had never seen a fistula follow when the wound was left open. As to the protection of the abdominal cavity, it was always wise to bring the gall bladder immediately up into the opening and unite it to the edges of the wound in the abdominal wall. Of course, of itself, bile in the peritoneal cavity would do no harm, but possibly some of these stones might roll out without our knowledge.

Dr. H. H. SCHROEDER said he wished to speak of a form of treatment which was useful during the interim. We constantly saw statements coming from certain noted spas in Europe and this country concerning the wonderful solvent action of the mineral water of those places on stones in the gall and urinary bladders. The speaker had been for a while resident physician at the Glenwood Hot Springs, of Colorado, and he had seen nothing there to convince him of any solvent action whatever. Both he and his predecessor had patients who had gone there for treatment of gallstones. Those patients in whom the gallstones had been removed by surgical or other means had been much benefited; the general health had been restored, the catarrhal conditions of the intestinal mucous membranes had been overcome, and the various functions had been stimulated. The speaker attributed these results to drinking the water, which had acted as a laxative; to the invigorating climatic conditions; to strict dietetic treatment, and to regular habits while under observation. The cures in these cases had lasted longer than those usually experienced, even after the patients had returned to their former mode of living.

Dr. BAXER said that the treatment between the attacks was sometimes one of the most discouraging things in practice, when there were other stones in the gall bladder. The patients were put in the best possible condition to prevent the formation of new stones; they went to Carlsbad and took the treatment there for six weeks; they came back and lived a thoroughly hygienic life, and then, suddenly, there would be another crash, and in some cases they would get so discouraged that they absolutely refused to go on with the restricted diet. The treatment at Carlsbad and other mineral springs seemed to work well if the stones had not already formed before the treatment was begun, but, unfortunately, there was no way to judge whether the stones had formed or not. He had found it possible to give a very satisfactory Carlsbad course in New York by having the patients walk to the place in Central Park every morning for their glass of hot Carlsbad. In some cases it was remarkable how much benefit was to be derived from this regular exercise and system. Dr. Carr had spoken of the various solvents, and had mentioned oil incidentally, but not as one of the solvents. It was well known that oil dissolved gallstones if actually brought into contact. Practically, the speaker's experience with oil had not been good, but theoretically he thought that if the stone was lodged in the duct just at the point where

the duct entered the duodenum—and this was, in fact, a very narrow part of the duct—the oil might be able to reach it and exercise a certain amount of solvent action. In his experience the giving of oil had not been uniformly beneficial. It had sometimes upset the stomach and had caused more trouble than good. With regard to the treatment of an acute attack, Dr. Carr had not spoken of the time-honored custom of putting the patient in a hot bath, which often gave much relief. In the use of morphine he favored the practice of giving rather more than a quarter of a grain at the first injection, as less would actually be needed in the long run than where the smaller dose was given at first.

Dr. GALLANT said, in reference to the water of the Glenwood Springs, Colorado, that at ten o'clock one evening last June he had gone down into the swimming pool and had enjoyed a hot bath, and if the effect on gallstones was as good as the taste of the water was bad, he thought it must be very efficacious. Dr. Cole mentioned that cases of abscesses in the pelvis, which arose from the gall bladder, had been reported. The following case which the speaker, as an assistant, had seen, was of that character: The diagnosis of appendicitis, from the symptoms which usually accompanied that disease, had been made. There had been no previous history of gallstones, and preparations for the operation had been made with the idea of taking out the appendix. While he had been scrubbing up the patient he had noticed that the whole right side was tense, extending from the pelvis up under the ribs, as if filled by a large tumor, to which he had called the attention of the surgeon. The surgeon had first made a small median incision, through which to determine the size of the tumor, and the best point for drainage. He had found it in contact with the abdominal wall, midway between the umbilicus and the anterior superior spine. The median incision had then been closed, and a second incision made directly down to the tumor; the opening had been packed with gauze that adhesions might take place between the abdominal peritoneum and the tumor. Twenty-four hours later a small incision had been made into the tumor and a quart of what looked like dirty-brown cream had drained off. A drain had been placed in the opening, which the next day was enlarged enough to admit the finger, and to their surprise another quart of the same liquid had drained away, and with it twenty-two gallstones. The patient had done well and within a few months the opening had closed. So far as was known, the patient had never had any further symptoms. Three other cases of gall-bladder disease, which the speaker had seen, had been treated by the open method—viz., sewing the gall bladder to the peritoneum, incision into the gall bladder, allowing it to drain. The fistula, without suture, had gradually closed.

Dr. Carr spoke of some symptoms that had not been mentioned. First: He had been surprised in a number of instances to find fine rales at the base of the right lung. In one case of gall-stone colic crepitation had lasted twelve hours. The patient was a stout man and had had a previous attack. There might be some explanation of these cases in connection with the interference of circulation at the base of the lung, which was, perhaps, accounted for by the ascending pain and the limited action of the diaphragm on that side. Second: The symptom of jaundice was in some instances an uncertain one; one looked for jaundice when there was an obstruction, but jaundice was noted so often after operation, where no stones had been found except biliary con-

stones, masses about the size of a pinhead, that it would seem as if it was not always necessary to have complete occlusion. Jaundice was also found where stones were in the hepatic duct and pressed against the common duct. In the matter of treatment, he called attention to the fact that the so-called dissolving treatment of various drugs was much overestimated, and while for a great many years the French, English, and all competent observers made use of chloroform, ether, turpentine, and sweet oil, these drugs did not dissolve the stones. They did some good in increasing peristalsis; especially the sweet oil. If sweet oil increased peristalsis, there was a greater flow of bile, expulsion of stones in some cases, and a better condition of the intestine, because the intestine was made more antiseptic. It could hardly be made aseptic in those cases. The commonest causative factor in the formation of these stones was undoubtedly the *Bacterium coli commune*. There was no doubt that anything that increased peristalsis eliminated causes of catarrh in the intestine and lessened the formation of calculi. Medicinal treatment alone was unavailable. A great many patients could be cured by systematic management, but they so often overstepped the bounds, took salads and late suppers, that the stones would reform, because they would have unnatural conditions brought about with the resulting changes to the gall bladder. When the disease reached a point where the patient was not relieved, either by general management or drugs, surgical means should be considered; but, so far as he could learn from the works on this particular branch of surgery and by conversation with men who had done the work, a great many patients had been operated upon in whom the gallstones had been so small and insignificant that it was a question whether the conditions that called for the operation were definitely studied, and it looked as if it would be necessary to have a more exact diagnosis of calculi before operation could be proposed in a general way to take the place of continued medical treatment and observation.

Dr. Cole said he would like to thank the gentleman who had presented the article on anatomy, and particularly in regard to the arterial distribution. He agreed entirely with Dr. Bissell as to the indications for operation, and so stated them in the paper: that where attacks occurred, when the jaundice was persistent and where the medical measures were not of any value apparently, operation was absolutely demanded, and the sooner the operation the better the chances for recovery. The same was true in a general way of all surgical procedures. In his own experience olive oil administered in large doses had been beneficial, and he had repeatedly given it to patients with acute biliary attacks. When they had retained it and the oil had gone through, the stones had done the same thing. He spoke of a patient who, after having taken a teaspoonful of olive oil, had passed a number of good sized stones. The physician who had treated the case stated that there had been eighty or ninety stones passed by the bowel after this dose of olive oil. About two or three years ago a gentleman had come to his apartment about three o'clock in the morning with quite an acute attack of biliary colic. The speaker had given him a hypodermic injection of morphine, relieved his pain, and sent him home, telling him to take a big dose of olive oil, which he had done, and he had recovered from the attack, passed the stone without any trouble, and had not had an attack since. The preventive treatment by the cholagogue of sodium seemed, by an examination of the litera-

ture, to offer the best chances, and the cases that had been followed up appeared to have done better, though there were not a great many cases recorded. Of course, general hygiene was the essential point in the after-treatment.

Dr. D. E. WALKER said that some years ago he had had a patient who had had frequent attacks of gallstone colic, and in whom he had found a very perceptible tumor in the gall bladder. An operation had been suggested, but she had been advised to take large doses of olive oil first, and after having used that a few days she had passed by the bowel over a hundred gallstones. The tumor had disappeared from the gall bladder and the patient had had no attack of colic since. He had had a case recently in which the attack had come on immediately after a hot bath. Dr. Baner had spoken of hot baths as being, probably, a good thing in the treatment of a case, and the speaker agreed with him, because it would bring on a relaxation of the walls of the cystic duct, and that was probably the explanation of the attack in that case. There had probably been a stone in the gall bladder, and it had entered the duct at that time and had brought on an attack of gallstone colic.

Dr. GEORGE H. MALLETT said that what he had to say was in regard to some difficulties in making a diagnosis. He was especially disappointed in Dr. Hagan's researches. He had a patient under his care who had been to five different eminent men, and to some intestinal specialists; but they had not been able to determine what was the matter. Last summer a patient who presented a large tumor, probably as large as a small fist, as near to McBurney's point as it could be located, had come to the hospital. Five other specialists had been consulted in this case, and the diagnosis had varied from appendicitis to fecal masses, floating kidneys, and sarcoma. Finally, they had weeded down and thought possibly it was a floating kidney or gallstone. The only symptoms the woman had given were bearing-down pains and loss of flesh, and the skin was particularly dry. An incision had been made over the mass, which had proved to be the gall bladder; there was found a very long neck and they had removed about six hard stones and an enormous quantity of small gallstones. Nothing had come of it, and the wound had healed and the woman had recovered. He was inclined to doubt the number of stones spoken of as being passed after taking oil. He had seen patients pass a number of stones, with no history of gall-bladder trouble.

Dr. BREWER stated that he was surprised that no one had mentioned the new and ingenious operation recently suggested to the profession by Dr. McBurney, which consisted in opening the second portion of the duodenum and removing the calculus through the duodenal orifice of the bile duct. In his paper he had attempted to point out certain landmarks which would materially assist the surgeon in locating the papilla in case the stone was not impacted at that point. He cited a case which had come under his observation last summer at the City Hospital, in which he had found, on examination, only a small, hard, movable nodule to the outer, right side of the umbilicus. Upon opening the abdominal cavity, this nodule had been found to be a small carcinoma of the fundus of a very movable gall bladder, the mobility of the organ having been due to the presence of a mesentery which connected it with the liver, similar to those described in the paper. The entire gall bladder and an inch of the cystic duct had been removed. The patient had made a complete recovery, but had died six or eight

months later, probably from a recurrence. He cited another case which he had seen in consultation with his colleague, Dr. Kelly. In this case Dr. Kelly had utilized an old biliary fistulous tract for the reestablishment of a communication between the hepatic ducts and the duodenum. Dr. Kelly had excised the fistula and had implanted the cutaneous extremity into the duodenum. The patient had made a complete recovery, and had been relieved of an infirmity which had been thought by many to be incurable.

Miscellany.

What General Wood has done for Santiago.—We do not often reproduce things wholesale, but the present account of the great work accomplished by General Wood in Santiago, coming, as it does, from a foreign source (*Medical Review of Reviews*, May, citing the *Fortnightly Review*) is so gratifying that we can not refrain from reproducing it *in extenso*. The *Review* says:

"Sanitary reform in Cuba is not the least important of the scientific work being carried out under American auspices in their newly acquired territory. Under Spanish rule, Santiago had established an unequaled reputation for insanitation, and General Leonard Wood, M. D., of the United States Volunteers, when appointed governor, found the city in an indescribably filthy condition, its normal state having been aggravated by the horrors of the siege. Immediately upon assuming control of the district, the insanitary condition of the city was one of the first measures that received General Wood's attention. Under his administration, the daily death-rate has fallen from two hundred to ten, and the inhabitants have been rescued from a system that tended to reduce them to beggary. The old abuses that turned the law courts into inquisitions and the customhouse into a treasury for a privileged class have been swept away; and Santiago, with its clean streets and free press, is in a fair way to become one of the most healthy as well as one of the most beautiful cities in the New World. It is a generally current fallacy that the average medical man is unsuited for any pursuit other than the practice of his profession. As a rule, he is not considered a good man of business, and he is rarely, in this country at least, appointed to important positions of administrative control. The story, however, told by Mr. H. H. Lewis, in a recent number of the *Fortnightly*, of General Wood's remarkable work at Santiago, is a striking picture of what a medical man can accomplish when appointed to an important administrative position. This glowing tribute to the capabilities and noble character of an Anglo-Saxon physician can not, we think, fail to be of interest to every English-speaking member of the medical profession, and we are glad of an opportunity to quote, somewhat at length, the summary in the *Review of Reviews* of Mr. Lewis's article. As Mr. Stead has said, the story of General Wood at Santiago is a tale of modern chivalry that stirs the blood of every true lover of his kind. 'Hero as a Scavenger,' as Carlyle might have termed him, is the title given to the ex-colonel of the Rough Riders and the present Governor of Santiago. The writer says: "If ever in this world the extraordinary man, the

man of destiny, the man of preeminent power and resource, was needed, it was in Santiago de Cuba during the latter part of July, 1898. The occasion demanded first a physician, to deal with the tremendous sanitary needs; then a soldier, to suppress turbulence and effect a quick restoration of law and order; and, finally, a statesman, to re-establish and perfect the civil government. In General Wood was found a man who, by nature, education, and experience, combined in himself a generous share of the special skill of all these three. As in Havana, the Augean stables were here completely outdone. For two centuries Santiago had borne the reputation of being one of the most unclean cities on earth. Of it an old merchant captain had said, 'It could be smelt ten miles at sea.' When General Wood assumed the government of Santiago on the 20th day of last July, its streets and courts and houses had come to the last degree of filth and noisomeness, and of its forty odd thousand residents great numbers were sick, no small number were starving, and all were utterly miserable. Bodies of the dead lay in the streets, and as the new governor rode about the city, making his first inspection, vultures flew up before him from feasting on human carcases. Within a few hours of the receipt of his appointment he had thrown off his coat and was heartily at work. Happily for the quick and sure execution of his task, he began with ample powers. The matters that first claimed his attention were the feeding of the starving people and the amendment of the city's sanitary condition. As many rations as could be obtained were issued with a free but careful hand; food depots were established at various places; and before forty-eight hours had passed actual famine had been brought to an end. But as the supply of food increased through the ordinary channels of trade, the prices did not decrease. General Wood accordingly sent for the butchers and demanded from them the price at which they bought the meat they were selling at ninety cents a pound. After futile attempts at evasion, they confessed they paid only fifteen cents a pound. The general promptly informed them the selling price must go down from ninety to twenty-five cents; and go down it immediately did. Other food prices quickly followed.

"What is described as 'Santiago's first cleaning' was next taken in hand. The city was one vast charnel house and cesspool combined. In all the interior courts there were cesspools, and these were almost never emptied, and became fountains of foulness and disease. Even in the houses there was the grossest uncleanness. In many of them, owing to the recent stress of epidemic and starvation, were found decaying human bodies; ten were found in a single house. The clouds of vultures, voracious as they were, found the human meat too plentiful; theiravings filled houses and streets with nauseous corruption. The death rate, at ways high in Santiago, became at this time about two hundred a day. In his first proceedings against this unspeakable squalor General Wood received but little aid or sympathy from either Spaniards or Cubans. The neglected human dead were, however, soon carted outside the city, heaped into piles, sprinkled with kerosene, and burned. In one funeral pyre even bodies were consumed. It reputedly must have been in darkness and daylight to clear one street. After a few days, a house to house sanitary inspection was made, and the householders were notified that all cesspools

must be emptied without delay. Then an order was issued calling upon the housekeepers to collect their household garbage in boxes or barrels for the wagons that were sent round in the early morning to haul it away. At first there was some demur to the new method; but sharp words, threats, and in some cases actual corporal punishment brought it into general observance, and now the householders of Santiago vie with each other in having their garbage boxes ready for the call of the street-cleaners' carts. More serious opposition was caused by the introduction of disinfectants; this caused open rebellion. The previous odors—time-honored and, as it were, the custom of the country—were preferred to the odor of chloride of lime. It was scattered, nevertheless, with a liberal hand, and now requests for disinfectants are received daily by the health department. Moreover, people are beginning to notify the sanitary officer of the existence of unclean cesspools maintained by their neighbors.

"The streets had never been properly laid, and the heavy army wagons had churned the atrocious roadways into rivers of liquid mud. A circle was drawn about the city, and a line through the centre. The line was Marine Street, and part of the circle represented the water front, along which was a really beautiful and picturesque drive, known as the 'Alameda.' 'Build a boulevard where I have drawn the circle, and pave Marine Street. Hire Cubans; pay them fifty cents and a ration a day,' ordered General Wood. The boulevard is in course of construction, and Marine Street is being paved. After burying the dead, emptying the cesspools, paving the streets, and arranging for a better water supply came other reforms. The new administration made important changes in the school system, including the severing of the schools from the church, and the introduction of English into the curriculum; established a rural police force, and effected a temporary suspension of mortgage foreclosures to enable the small farmers to recover from the effects of the war. The jail was the lair of shameful injustice, and the very home of Yellow Jack. Poor wretches had been shut up without trial for years—one man for ten years simply 'at the will of the governor-general.' They were promptly liberated. Henceforth no prisoner is detained forty-eight hours without either a trial or an investigation.

"These drastic reforms aroused considerable opposition. A riot broke out at San Luis, a town twenty miles out. General Wood heard of the riot while he was down with fever. Ill as he was, he ordered his carriage, drove to the telegraph office, and for three hours dictated instructions. Next day, still racked with fever, he went to San Luis and investigated matters on the spot. On September 22 a mob of infuriated Cubans attacked the Spanish Club, opposite General Wood's office, where he was sitting writing, defended by a solitary sentinel. He picked up his riding whip and, accompanied by the one soldier, strolled across to the scene of the trouble. The Spaniards in the club had closed the door, but the excited Cubans were trying to force a way in by the side entrance. 'Just shove them back, sentinel,' and General Wood entered. Around among the tables a war was cleared in front of the door. Now that the fighting was over, he placed his foot upon that which he called a 'snail's pace' and deliberate manner. He then turned and directed the sentinel to write, 'The mob dispersed, subdued by two men, one rifle, and a riding whip.'

"The change effected by this Paladin of the dust cart in four months is thus summarized by Mr. Lewis: The rescue of the population from starvation to a fair satisfaction of all their daily necessities. The conversion of one of the foulest cities on earth to one of the cleanest. The reduction of an average daily death-rate of two hundred down to ten. A considerable progress in a scheme of street and road improvement that will add immensely to the convenience and beauty of the city. A radical reform in the customhouse service, resulting in increased revenues. A reduction in the municipal expenses. The correction of numerous abuses in the management of jails and hospitals, and in the care of the inmates. The liberation of many prisoners held on trivial or no charges. The reformation of the courts and a strict maintenance of law and order. The freedom of the press. A restoration of business confidence, and a recovery of trade and industry from utter stagnation to healthy activity.

"General Wood's career as military governor of the province of Santiago de Cuba is a conspicuous example of the special fitness for administrative work, under new conditions, developed by a medical training. General Wood, who is but thirty-eight years of age, graduated at Harvard in 1882. He subsequently joined the army as a contract surgeon, and took part in several campaigns against the Apaches in Arizona and New Mexico. When the war with Spain broke out, he was an assistant surgeon in the United States army, with the rank of captain. He was stationed at Washington at the time, and, together with Governor Roosevelt, raised a regiment of cavalry, of which Wood was to be colonel and Roosevelt lieutenant colonel. This is the regiment which, as the 'Rough Riders,' won for itself such distinction in Cuba."

How to Make Paper Waterproof.—To the physician, especially to the one practising in out-of-the-way places, the following simple method, quoted by the *Sanitarian* for June from the *Journal of the Franklin Institute*, may prove useful: The German journal *Neueste Erfindungen* describes the following method of making a waterproof paper: The sheet is coated on both sides with a solution consisting of one part gelatine, four parts water, and one part glycerin. When dry, the paper is immersed in a ten-per-cent. solution of formalin. After this treatment the paper is said to become impervious even to steam.

Trained Nurses for Epileptics.—Dr. William P. Spratling, medical superintendent of the Craig Colony for Epileptics, at Sonoma, N. Y., established two years and a half ago a training school for nurses. The course embraces the subjects usually taught in such training schools, and, in addition, special attention is paid to epilepsy.

The school held its first graduation exercises on the evening of June 5, 1899, a class of eleven, seven men and four women, graduating at that time. Fifteen students received first-year certificates at the same time.

Treatment of the Abdominal Viscera through the Colon.—At the recent meeting of the American Medical Association, held in Columbus, Dr. Fenton B. Turk, of Chicago, read before the Section in Medicine a paper of which the following is an abstract:

The intimate relation of the hepatic, splenic, and sigmoid flexures and the transverse colon with the liver,

duodenum, kidney, and pelvic organs makes it possible to influence these organs and the metabolism of the body through the colon by the direct application of heat, cold, electricity, and other physical stimuli. In discussing such treatment, we will consider (1) the direct effect in removing pathological conditions of the colon; (2) the effect of contiguity with other viscera; (3) the reflexes.

The most frequent indication for treating the colon is for evacuating retained contents. Employing large quantities of water, salts, glycerin, or soaps may afford relief, but in chronic diseases they are not only inadequate but harmful. The muscular walls and mucous membrane may both be diseased, necessitating direct remedial applications. Heat relatively high, directly applied to the mucous membrane, immediately stimulates the vasomotor centres, raising the blood pressure, stimulating the kidneys, increasing the hepatic function, inducing leucocytosis, and accelerating metabolism, oxidation, and elimination. The methods of treatment employed are (1) hydrotherapy; (2) hot and cold air; (3) massage; (4) electricity; (5) medication; (6) dietetics.

The position, elevating the hips high in the dorsal posture upon a table devised for the purpose of raising the patient to any angle, is a very important consideration. From two hundred and fifty to three hundred cubic centimetres of water at 122° F. are passed into the colon three or four times, each quantity being allowed to run off before more is introduced. The treatment is continued with water at 125.6°, increased to 131°, using in all from three to six quarts. The patient is then sent to the toilet room, after which the treatment is repeated.

Experiments upon dogs have been conducted as follows: The abdomen is opened under local and partial general anesthesia. The viscera are exposed to cold draughts until there is a fall of blood pressure approaching collapse. Water at 122° is then introduced into the colon for five minutes without marked change. The water is withdrawn, and the animal allowed to pass into collapse, when the viscera are of a bluish shade and the vessels congested and tortuous. Water at 131° is introduced for one minute, and then withdrawn. This procedure is repeated several times, during which the blood pressure gradually rises, and within ten minutes the animal is out of shock and recovers.

Daily observations and comparisons made upon patients show circulatory effects verified by the sphygmograph and sphygmometer; blood changes—(a) noticeable increase of red corpuscles, (b) leucocytes markedly increased; effects upon gastro-intestinal tract, kidney, and liver; effects upon the temperature of the mouth, skin, and stomach, and upon the pelvic organs; and an action on elimination and self-intoxication, and general metabolism.

As regards the gastro-intestinal effect, there are at first local contractions, generally followed by peristaltic and antiperistaltic movements of the small intestines. The kidneys are stimulated to secretion within three minutes. The bile is increased in proportion to the excretion of urea. Metabolism, destructive and constructive, is influenced by impulses in the same nerve, either singly or both at the same time.

Colonic lavage in all forms of pelvic congestion is invaluable, and the water is borne at a higher temperature than in the vagina. Self-intoxication may evidently originate through functional inactivity in the gastro-

intestinal tract, liver, kidneys, skin, and lungs. In the gastro-intestinal tract it is of more frequent occurrence than is commonly supposed. Acute gastro-enteritis is relatively rare, but chronic gastro-intestinal atony is quite common, resulting in various symptoms of self-intoxication.

The liver, either by producing toxic material or by failing to take care of the toxins passing through it, as in cases of catarrhal inflammation of the bile ducts, contributes to the result.

The American Proctological Society was organized on June 7th, and the following-named gentlemen were elected officers: Dr. Joseph M. Mathews, of Louisville, president; Dr. James P. Tuttle, of New York, vice-president; Dr. William M. Beach, of Pittsburgh, secretary and treasurer; and Dr. Samuel T. Earle, of Baltimore, Dr. A. Bennett Cooke, of Nashville, and Dr. J. Royal Pennington, of Chicago, councillors.

Death of Dr. Richard B. Westledge at Manila.—

From the *Dubuque Daily Times* for June 11th we learn of the death of Dr. Richard B. Westledge, first lieutenant of the Third United States Infantry, at Manila. Dr. Westledge left a good practice in Dubuque to serve in the war. He leaves a widow, at present in California.

The Future of the Woman Physician.—At the graduation exercises of the Women's Medical College of the New York Infirmary, on Thursday evening, May 25th, Dr. Frederick Peterson, clinical professor of insanity, made a brief address to the class of 1899, from which we make the following extracts:

There is something inspiring in seeing a battalion of troops going forth to the wars, and if we look at it aright there is even greater inspiration in observing a company of young physicians setting out for a lifetime of continuous battle against the diseases and disorders which afflict mankind. The warlike conquerors, on the one hand, march out to slay their own kind, but the "conquerors of peace," as they have been well named, give battle to other foes, to the invisible enemies that wear the garb of many a perilous disease, and set forth not to kill but to save their fellow men. In the stories of the ancient wars there are traditions that companies of women sometimes took arms and fought desperate fights on bloody fields. In these more peaceful battles of modern times to which I have just referred we witness the onslaughts of phalanxes of new Amazons which make annual sorties from our medical schools for women. In the end the "conquerors of peace" will prevail, and not a few of the laurels of victory will belong to the women who have bravely borne a notable part in the strife against disease.

With the gradual progress of civilization, with the slow but sure evolution of society, the work of the woman physician must unfold and broaden to an extent undreamed of now. At the present time her professional duties are chiefly among women and children, but there are already indications of wider fields of labor. To the delicate manipulations of laboratory research she can bring such deft and skilful fingers that a man's awkward hands seem like the flippers of a seal in comparison. Centuries of fine needlework, crocheting, and embroidery have prepared those fingers for section-cutting, staining, and the innumerable synthetic and analytical processes now started to modern methods of scientific research. She brings also to

science the intuitive wit, the swift imagination, the deductive methods of philosophy which Buckle so lauded in his essay on *The Influence of Women on the Progress of Knowledge*. This writer gives his reasons for affirming that women are more deductive than men: "First, because they are quicker than men. Secondly, because, being more emotional and enthusiastic, they live in a more ideal world, and therefore prefer a method of inquiry which proceeds from ideas to facts; leaving to men the opposite method of proceeding from facts to ideas." He goes on to say that "women have rendered great though unconscious service to science by encouraging and keeping alive this habit of deductive thought, and that, if it were not for them, scientific men would be much too inductive, and the progress of our knowledge would be hindered."

But this service to science rendered by women is now no longer unconscious, as Buckle described it at the time he wrote this essay, over forty years ago. It is a fully conscious service, as is evidenced by the very creditable work of women at the present time in many branches of science. There is a real place for the women who graduate as doctors, but do not care to practise the art of medicine, in our laboratories for pathology, chemistry, physiology, psychophysics, and the like, and physicians of both sexes are fast beginning to appreciate the peculiar fitness of women for work of this kind.

And this is not by any means the whole domain over which the woman physician may yet come to rule. There is a particularly feminine quality which will ultimately serve her in still another important sphere of activity. All these centuries of domestic occupation, before woman entered upon her commercial and professional career, have bred in her an instinctive love of cleanliness and beauty. As a physician she does not lose that innate sense of orderliness, neatness, cleanliness, nor does she give up the hereditary desire to surround herself with what is pleasing and attractive. Let the woman who becomes a physician but extend the art of which she has such peculiar knowledge, that of making the home clean and charming, to circles reaching far beyond the home, to the streets, to the towns, and to the cities, and what vistas for well-doing will open up before her! In other words, I should like to see well-trained women physicians on our public boards of health. As women and as physicians you will some day come into your own, and expand the principality of your tidy, healthful, and beautiful home into the wide kingdom of public health and hygiene. Our streets will be thoroughly clean, our water supplies and methods of sewage-disposal perfect, our thoroughfares sprinkled and shaded, our pavements improved, our factories made healthful, our public baths and parks multiplied, the homes of the poor redeemed from squalor, and you shall go with all the paraphernalia of modern Amazons into the darkest places to fight and conquer the pestilence that walks therein.

But this may bring you into politics! Well, there was a noted statesman who addressed the Academy of Medicine a few years ago, and in his address he spoke of the diseases of the body politic, which physicians in general were prone to neglect. He strongly urged physicians to awaken to a sense of their own responsibilities toward the diseases which afflicted the body politic. Doctors as a class are more careful of their civic duties than in other circles of the community. They should begin to study, clearly and conscientiously, the diseases of the body and to see to the end that some happy

therapy may bring about regeneration. The women physicians can further this work with hand and voice and, it may be, votes.

The Harlem Medical Association.—At a meeting held on June 12th officers for the ensuing year were elected as follows: President, Dr. Henry W. Mooney; vice-president, Dr. Montrose R. Richard; secretary, Dr. Joseph E. Lombard; treasurer, Dr. William F. Farrell; trustees, Dr. David Franklin, Dr. Samuel Gibbs, and Dr. Henry Heiman.

The following resolution was also passed:

Resolved, That the members of the Harlem Medical Association having heard with deep regret of the death of their late associate, Dr. Henry E. Crampton, desire hereby to express their appreciation of his upright, kindly, and cheerful character and of the great loss which the profession has suffered in the untimely removal of one of its members who was more than ordinarily prominent in many fields of usefulness to his fellow man outside of the purely professional round of duties.

The association desires further to express the deepest sympathy with the near relatives of the doctor, upon whom the loss of husband and father falls most heavily, and who could best appreciate the beauty and sweetness of his character.

[Signed.] RICHARD VAN SANTVOORD, M. D.,

Chairman;

J. T. JOSEPH BIRD, M. D.,

JOSEPH E. LOMBARD, M. D.,

Committee.

Preliminary Report on the Tuberculosis Congress.

The congress was held in Berlin from May 21th to May 27th, in the Reichstag Building, and the opening session took place in the presence of the Emperor and other high German officials. The most prominent German physicians, hygienists, and bacteriologists were present, as well as representatives of the leading medical nations from England, France, Russia, Italy, Denmark, Austria, Japan, Spain, etc.

The papers presented by the most prominent men were very thorough and were complete reviews of our present knowledge of tuberculosis, both from the scientific and the practical standpoints. The special object for which the congress was called—namely, the purpose of arousing interest in the erection of sanatoria for the tuberculous poor, especially the working classes—will, it is hoped, be greatly advanced. According to the present German laws, each laborer and each employer of a laborer is required to pay a very small tax, which is subsequently utilized in taking care of the tuberculous poor. In this way quite a large fund has been secured, and at the present time there are fifty sanatoria in the German Empire in which the poorer and laboring classes can be treated; and a double purpose is thus, moreover, served, namely, the improvement of the health of the individuals and at the same time their education in sanitary matters.

While there may not be any direct practical results from this congress, there will be many indirect ones.

The papers presented by two well-known bacteriologists upon the ways in which tuberculosis is contracted, especially from the dust, were very complete and satisfactory. While a number of papers upon different methods of treatment were read, it can be said that as yet no method has been presented which has given better

results than those methods which are used in our own sanatoria, or better results than those secured in many sanatoria where no special method of medical treatment is followed. There were over two thousand members of the congress and over two hundred official delegates from the various States of the German Empire and the countries before mentioned.

One of the most important things in checking the spread of tuberculosis in all countries is to educate the people thoroughly in regard to the different ways in which tuberculosis may be contracted and the great danger of associating with tuberculous individuals. In other words, the people generally must be thoroughly educated in hygienic matters. Congresses of the same character as the one just held in Berlin help a great deal in this general education and in exciting interest, and are therefore productive of great good. Similar movements which have been started in America should be encouraged. When the officials and prominent people of a government take an active interest in a congress of this sort, as has been done in Germany by the Emperor and Empress, more general interest, and consequently more good, naturally results. The official delegates from the United States were cordially received and entertained with the utmost courtesy. Several very valuable monographs were presented to the congress, one especially upon German sanatoria by Dr. Panwitz, general secretary of this congress, which are well worth careful examination. Dr. Panwitz will be very glad to send copies of his monograph as well as other similar papers to physicians who are especially interested in the erection and equipment of sanatoria for consumptives. A letter addressed to the Central Bureau of the Tuberculosis Congress, Wilhelmsplatz 2, Berlin, will receive prompt attention.

E. A. VON SCHWEINITZ, M. D.,

Delegate for the United States to Tuberculosis Congress.

The Alumnae Association of the Northwestern University Woman's Medical School held its nineteenth annual meeting on June 15th at the Woman's Medical School, 337 S. Lincoln Street, Chicago, Illinois. Dr. Julia Cole-Blackman, Geneva, Illinois, was elected president; Dr. Eliza H. Root, secretary, and Dr. Mary C. Hollister was reelected treasurer. The reports of the treasurer and the various committees showed the association's condition to be one of prosperity. The appointment of Dr. Marie J. Mergler, one of the alumnae, as dean of alma mater was indorsed, and the university authorities were thanked for the appointment. The Earle Memorial Library reported five hundred volumes on its shelves, a very satisfactory growth for the short period elapsed since its foundation.

An Expedition to West Africa to Investigate Malarial Disease.—From the *Evening Post* for June 17th we learn that the newly formed School of Tropical Diseases at Liverpool, England, will dispatch an expedition to Sierra Leone early in August to investigate the causes of malarial and other indigenous diseases. Major Ross, of the Royal Army Medical Corps, is to head the expedition, and intends to continue the methods he used when similarly employed by the Indian Government.

Mount Sinai Hospital.—Dr. Joseph Wiener, Jr., has been appointed adjunct attending surgeon to the hospital.

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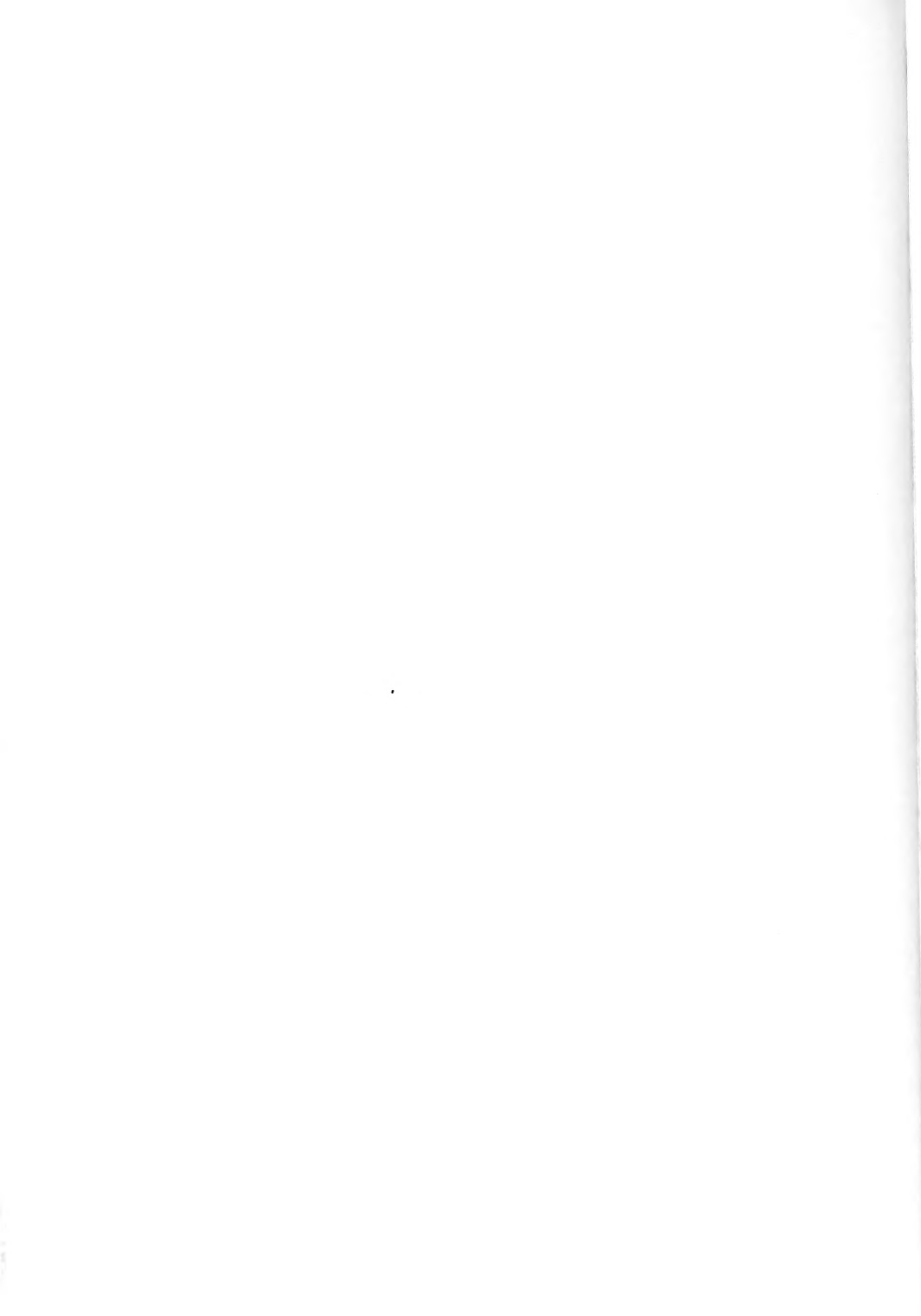
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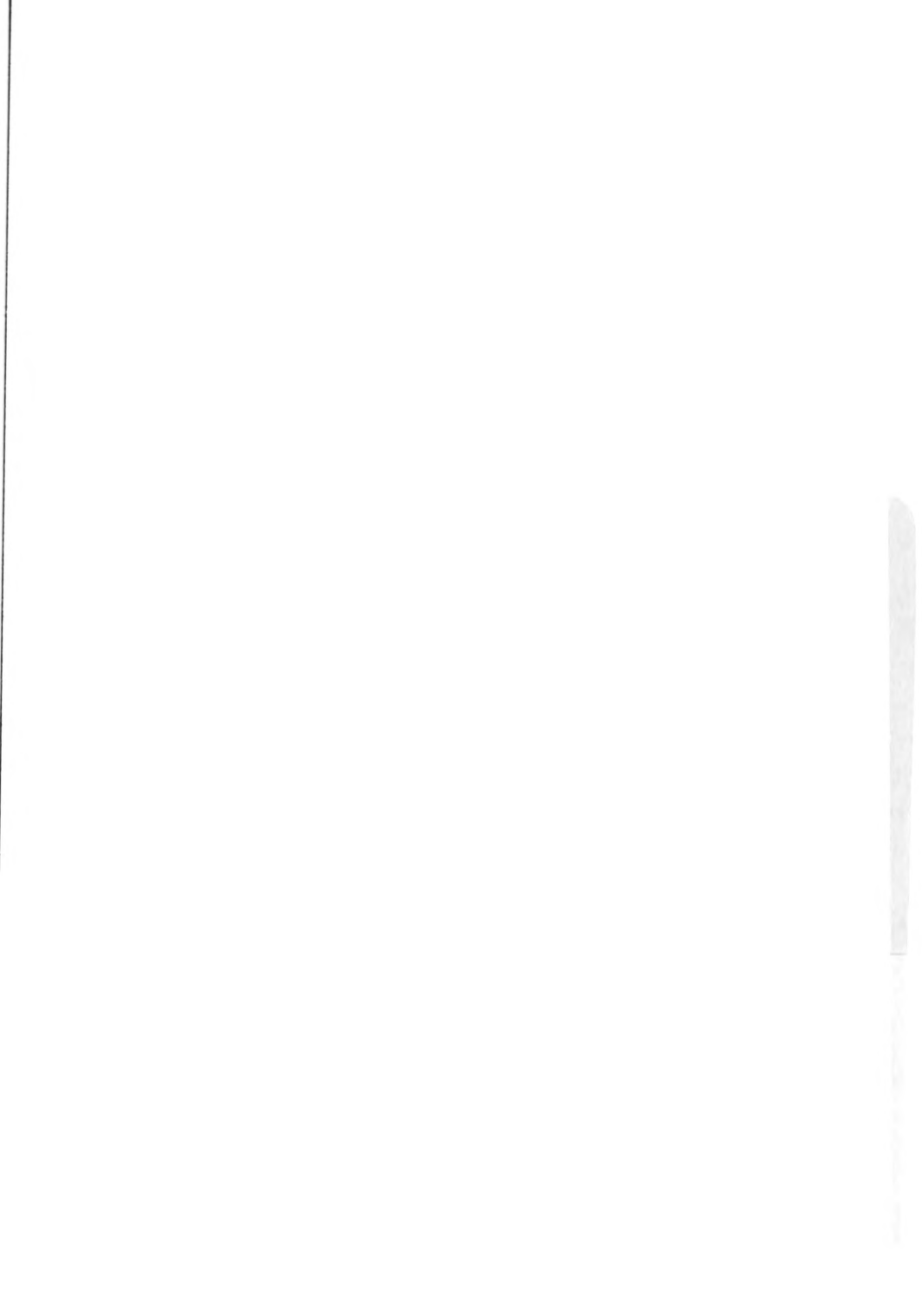
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